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PROPOSED SENATE ACTION ON AIR MAIL SUBSIDIES

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RECOGNIZING the necessity for assisting an infant and dynamic industry which had been in financial straits from its earliest days, the Congress in 1938, through the adoption of the Civil Aeronautics Act, authorized the payment of subsidies, in the form of air-mail pay, to meet the legitimate financial needs of the certificated air carriers. This was done deliberately and without reservation. As a result, today, the United States has the finest air transportation system in the entire world, serving approximately 600 cities in the United States on 16 trunk routes, 17 feeder lines and 2 helicopter services.

Since 1938 there has been a tremendous advance in the airline industry. In the postwar years, the expansion appeared wild and uncontrolled, passenger load factors, profits and security values dropped, and there was much criticism of airline management. The increase in plane miles flown with the larger capacity of aircraft since 1945 has resulted in a 100 per cent increase in revenue passenger-miles flown and in air cargo carried; a three-fold increase in seat-miles available; and a somewhat smaller increase in mail ton-miles. Last year alone the domestic airlines carried approximately 13 million passengers. However, this increase in business did not bring prosperity.

When I took over the chairmanship of the Interstate and Foreign Commerce Committee at the commencement of the 81st Congress our air transportation industry was still suffering serious financial reverses, and the subsidy support then being authorized by the Civil Aeronautics Board was inadequate and uncertain. The cost of doing business increased as advanced transport aircraft were acquired, for example, wages generally increased 81% since 1941, gasoline 30% and materials went up from 30 to 90%. The great increase in commercial air transportation plus the spiraling cost of doing business piled up losses, not profits, and the industry showed signs of being more and more dependent upon the Government for subsidy backing in the postwar period.

As soon as the 81st Congress was organized I sponsored Senate Resolution 50, which authorized our Committee to investigate the operational efficiency and the financial stability of the entire airline

industry, as well as pending and equally grave problems affecting land and water forms of transportation. We began aviation hearings on April 12, 1949 and continued through June, and heard more than 79 witnesses representing all branches of the Government and industry that could help us understand the basic reasons for the financial losses and increased need for federal subsidies at a time when the entire industry appeared to be enjoying phenomenal growth, with improved equipment, greater safety and greatly increased passenger and cargo traffic.

Mail Payments Involve Millions

Air-mail payments are designed, under the Civil Aeronautics Act, to meet the over-all financial needs of the carriers. The increase in air-mail pay has been substantial. In 1946 air-mail pay to all air carriers was $46 million. It increased to $112 million in 1949. In addition, in 1949 the carriers received $30 million in retroactive mail pay to cover their losses before 1949.

The task of measuring the financial needs of individual carriers, after judging in retrospect the economy and efficiency of management, has been a colossal task. Consequently, the Civil Aeronautics Board has fallen far behind in keeping abreast of this phase of its work and has resorted to the expediency of authorizing temporary rates which are subject to subsequent adjustment. Today, the Board has a phenomenal backlog of undisposed petitions for increased mail pay. If the Board should recognize all of the claims filed by the certificated air mail carriers, the staggering sum of $229 million would have to be appropriated to cover mail payments requested to date. I do not believe that they will receive this amount; I merely mention it to indicate the gigantic task that confronts the CAB and the tremendous sums which are involved. Without a dependable and comprehensive method available to identify what portion of that $229 million would be earned from mail service and what portion pure subsidy something bordering on utter chaos may be anticipated. One of these days a blow-up may be expected which will hit commercial aviation a solar plexus blow.

Only a few die-hards have contended that the $112 million paid out in 1949 was not in part a subsidy, that is, a payment by the Government to promote air transportation over and above the fair and reasonable cost of rendering air mail service.

When the Committee in Congress asked how much of this air-mail pay was for subsidy they were told, and our Committee was told throughout the hearings in 1949, that the law did not require the Civil Aeronautics Board to separately identify compensatory mail pay from subsidy payments, and that no one could say what proportion of this $112 million was in fact subsidy. Estimates were made before the Committee that the subsidy ranged between 40 and 60 per cent. No one was sure and the Civil Aeronautics Board said they were not in a

position to make the determination. This was disturbing to the various Committees of Congress who have seen increasing demands made for deficiency appropriations to cover the higher mail pay authorized by the Civil Aeronautics Board.

While drastic increases in mail payments made by the CAB in the last few years have saved the financial "skins" of many certificated airline companies and enabled them to provide a splendid air service the justification for the continuing call on the Treasury for more and more money has been neither convincing nor satisfactory.

President Favors Separation

All of the Government agencies concerned, various Congressional Committees, private citizen groups and most of the aviation industry, who came before our Committee recognized the desirability of finding a new clear cut method of paying airlines for the carriage of mail. This concern about divorcing compensatory mail pay from subsidy had been expressed year after year by many people and various groups, and even by the President of the United States, but until recently nothing of a concrete nature had been done to specifically provide for a solution.

As a result of the hearings before our Committee last year, the need to separate fairly and intelligently compensatory air-mail pay from airline subsidies emerged as the foremost economic issue confronting the Congress to improve our air transportation system. Thus, last summer the staff of our Committee began to study this problem intently. We asked the Civil Aeronautics Board to assist us, but found the Board preoccupied with setting temporary mail rates and other cases.

Our Committee engaged the services of Ernst & Ernst, an outside independent nationally-known firm of accountants and management consultants to give us some minor assistance as a demonstration on how to go about the gigantic problem of determining what the rates of mail compensation should be. We asked them to provide the Committee with an analysis of the standards and techniques that might be used in actually separating subsidy from mail pay and to make a pilot field survey of airline operations and costs. It was hoped that they would demonstrate the feasibility of their technique by applying it to a specific competitive route such as Washington and Chicago, but Ernst and Ernst insisted that it was impractical to apply to any route or station without more extensive technical cost studies than we had then authorized. The report submitted by them as of February 1, 1950 indicated that a great deal of time and thought had been given to the various problems involved and was most helpful and provocative.[1]

Defense Will Not Underwrite Subsidy

We called attention to the language of the Civil Aeronautics Act of 1938, which directed the Board to consider the national defense as

[1] For text of report, see 17 J. Air L. & Com. 86 (1950).

well as the postal and commercial need of the country in authorizing air service and asked the Department of National Defense to tell the Committee whether any portion of airline subsidies could be justified on grounds of the national defense requirements. The National Defense Department made an extensive review over a period of many months of its interest in civil aviation, and on January 30, 1950 testified that they would not be justified in underwriting any portion of airline subsidies; that the airlines, like the railroads and truck and bus lines, were vital to our economy and national defense, but no more vital, and that it was impracticable to fix, in terms of dollars, the amount of airline subsidy that could justly be charged to the national defense aspect.

At the same time, we undertook a study of airline station costs, which was used as the basis of my recommendation calling for a unique approach to the manner in which air-mail pay may be separated from subsidy. It is interesting to note that in conducting this study the staff was able to ascertain that out of a total of 482 cities during the fiscal year of 1949 almost 50 per cent of all domestic passengers carried were enplaned at 12 cities. Out of a total of 13,916,572 passengers carried, these cities enplaned 6,881,341, or out of 482 cities, 50 cities generated approximately 76 per cent of all the traffic, *i.e.,* 10,692,171 out of a total of 13,916,572 were enplaned at these communities.

During all the considerations and deliberations by the Committee, three objectives were kept in mind in our efforts to arrive at a dependable and constructive standard for the separation of subsidy from mail pay.

First, bring to light in the interest of the taxpayer the cost and fair value of the air-mail service now rendered and to establish a reasonable rate for that service on the same basis as other similar services rendered to the Government. This would transfer out of the Post Office Department all responsibility for financing the continued development of our air transportation system, a system which has outgrown the original conception. The Post Office is entitled to know and pass the true cost of air-mail service and to budget its expenses accordingly.

Second, subsidy separation would provide the taxpayer with the knowledge of the exact amount he is paying to the commercial air carriers to render the commercial and national defense services that the CAB has certificated each to render. The public and the Congress are entitled to know for what this subsidy is being paid and to whom and for what. They alone should judge the value of the contributions made by these enterprises to commerce and the general welfare. To protect private investments in the airline industry other than to promote a struggling industry is not the public responsibility.

Third, subsidy separation would establish the basis upon which the airlines of the United States can expect to enjoy financial help and eventual stability with assurance and honor. To mix mail pay with

subsidy has been a sloppy and wasteful way to do business. Separation of subsidy would restrict the power of the CAB to interfere unduly with airline management.

Short Haul Is Costly

A careful analysis of the conflicting opinions presented to the Committee revealed a common denominator that goes far to explain and justify the fundamental needs of airline subsidies. We found general agreement that airlines carrying only long-haul business and serving only a few high-density cities could operate profitably without Federal subsidy, or in other words, that the certificate requirement compelling an airline to serve a large number of small cities and to carry predominantly short-haul traffic absorbed most of the profits earned in the long-haul high-density business, and was the basic reason subsidy was required. Our studies showed that the need for subsidy increased directly in proportion to the number of small cities the airline had to serve. Thus the short-haul feeder lines understandably have the greatest requirements for subsidy and the long-haul transcontinental carriers the least.

The commercial traffic unbalance of the various routes is clearly the basis of this kind of subsidy. It is not necessarily a reflection on management. The need is clearly not a subsidy to the airlines. The airline is a quasi-public utility which renders a public service for a fair return. The subsidy goes ultimately to the passengers, cargo shippers, and air-mail patrons of the cities certificated by the CAB to enjoy airline service who do not generate sufficient revenue to pay for that service. If management economy and efficiency are up to par, the subsidy need come squarely from the service rendered such cities which the Federal certificate of public convenience and necessity requires.

Interim Report

Pursuant to an understanding I had reached with the Senate Appropriations Committee during the closing days of the first session of this Congress, I presented on May 5 of this year the station by station analysis of the air-mail subsidy to them.[2] I pointed out the true basis of airline subsidies which I have just described and stated that it is my considered judgment that a just method must be devised to pay fair compensation for the speedy carriage of mail.

Furthermore, I recommended that government support to each airline over and above just compensation be specifically identified on a community service basis and be justified to Congress in the annual CAB request for an appropriation.

To demonstrate what I recommended, I gave the Appropriations Committee a tabulation of airline community subsidies which the staff

[2] *Separation of Air-Mail Pay from Subsidy*, Committee Print, dated May 5, 1950, see page .... *infra.*

had prepared to show the government aid required to support the domestic trunk and feeder line services which each community had actually received during the fiscal year 1949. I left out the international carriers because they involve additional complicating factors. This table was constructed with a generous compensatory mail pay rate and with the most reasonable allocation of airline revenues and expenses to each city served that could be made from the public records available to the Committee.

Neither the allocation formula nor the figures are intended to be final, but merely to illustrate a new approach to this stubborn problem. The Civil Aeronautics Board should be required to request an appropriation to cover whatever subsidy is due the airline on such a formula. In other words, the CAB would pay the airline to serve certain cities and would not underwrite their whole operation as at present.

Industries, Cities, CAB Approve

As far as I can ascertain, this recommended approach has been well received by the airline industry and by the cities once it is understood and known that it is not intended that this Federal subsidy should be paid by the cities. I cannot see why anyone would oppose it. Even some of the individual members of the Civil Aeronautics Board have given their endorsement. This approach is new, sound and constructive, but it needs to be refined and developed until it is absolutely accurate. Unless its perfection is sympathetically and energetically prosecuted, however, it could very easily be lost in a mass of red tape, dilatory techniques and confusion.

In order to perfect this station cost formula to absolute accuracy, a staff of competent engineers will be required to make field studies and cost analyses of airline operations. Accurate and detailed analysis is required before either a satisfactory compensatory mail pay for separate routes or systems can be devised or the distribution of revenue and expenses to communities can be allocated.

When this task is accomplished, Congress will have done much to put this vital and growing air transportation system of ours on a sound financial basis. It will demonstrate to Congress in a simple and understandable manner the route patterns of the country and the nature and quantity of air service that the CAB has authorized. In this manner, a sound air transportation system designed to meet the present and future needs of the commerce, the postal service, and the national defense can be developed and stabilized with a clear understanding of what we are doing.

AIR AGE EDUCATION

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MAGNITUDE OF THE PROBLEM

DURING the war and postwar years aviation education has been brought intermittently to the attention of the aviation public. Spokesmen of the organized aircraft industry with bursts of prophetic zeal have spoken of the need for the schools to make of America "an air-faring nation." The spokesmen of air transport have stressed the need for youth to understand the implications of "a shrinking world."

By news stories, pictures, magazine articles, and radio commentary, the public has learned of the efforts of fixed-base operators, airlines, the Air Forces, Naval Aviation, and aircraft factories to bring aviation to American youth and to the teachers who influence the thinking of youth by providing them with courtesy hops, guided tours of their facilities, and occasional speakers.

In the past two years, however, two developments have led many people in aviation to wonder whether aviation education has something that transcends the immediate interests of the schools and the abilities of the schools to solve. The first of these events was the *Report* of the Joint Congressional Aviation Policy Board,[1] in which aviation education was listed as one of the nine points that comprised the Board's concept of the national aviation policy. The other development was the Aviation Education Conference held in February, at Atlantic City, sponsored by the American Association of School Administrators, for which schoolmen made the almost unprecedented move of inviting representatives of the aircraft industry, labor, air transport, and civil government and military aviation to work out jointly the problem of aviation education. It is hoped that from this Conference will grow a permanent or semi-permanent organization to serve as a meeting ground for these several interests of aviation education.

The *Report* of the Joint Congressional Aviation Policy Board called for "an air-minded public and a reservoir of technically trained personnel." It touched on the importance of education's giving our future citizens intellectual preparation for the world as aeronautical science has modified it in order that our citizenry "may meet the

[1] U.S. Congressional Aviation Policy Board. *A Report, National Aviation Policy.* Washington, U.S. Government Printing Office, March 1, 1948. p. 5 (80th Congress, 2nd Session, Senate, Report 949.)

responsibilities of world leadership." It stressed the need for trained teachers.[2]

The Aviation Education Conference of February, 1950, was sponsored by the American Association of School Administrators with the assistance of the Civil Aeronautics Administration's Aviation Education Division. It was a first step in establishing the basis for joint cooperative solution of such basic aviation education problems as materials of instruction and teacher training. It also may provide an opportunity for joint discussion of such questions as the nature of aviation education itself; the nature of aviation's social implications; and the nature of the aviation education interest of air transport, the aircraft industry, labor, personal flying, military aviation, as well as that of the elementary and occuratary schools. The meeting was somewhat unique in that it represented a national gathering of the branches of a great industry, on invitation of the schools, to discuss with the schools common problems involving broad areas of the curriculum. Occasionally schools and industry have met at industry's request; occasionally on invitation of the government or of a foundation; but seldom on invitation of the schools, and seldom has the scope of the discussion touched so many curriculum areas.

It is the purpose of this paper to discuss briefly the meanings that school people ascribe to the term aviation education; the nature and extent of the interests of air transport, aircraft industry, fixed-base operators, labor, and the schools in aviation education; the problems of aviation education needing solution; and the future for aviation education.

Defining Aviation Education

The term aviation education has a variety of meanings for school people. To some it means the airplane model building occasionally found in the technical arts courses and hobby programs of the schools. During the war years and the immediate postwar years model building received considerable impetus from the model industries and the National Aeronautical Association. In recent years because of the untimely cessation of their promotional efforts, which were leading to the publishing of textbooks and manuals for the several grade levels, model building in the schools has not fulfilled its promise, and may have lost ground. The Russians seem to be giving some attention to model building in their youth programs. Perhaps, the model building program of the American schools might be furthered by such an organization as was envisaged at Atlantic City, representing the several aviation education interests.

To other school people aviation education implies the mechanics training courses of the aircraft mechanic and engine mechanic trades. During the war years these were frequently found in the public trade and industrial schools. Today mechanic training for aviation trades

[2] *Ibid.*, p. 33.

is found in not over fifty of the nation's trade or industrial schools; this phase of aviation education could be of considerable importance if military aviation leaders should decide that its reservoir of technically trained manpower needed to be replenished.

Aviation education to many means a modified aviation ground school course given in the eleventh or twelfth grade of the high school. The high schools have called it "science of aeronautics," crediting it as an elective science. Some schools have added material on the social implications of aviation, and a few have provided a flight laboratory experience of three or four hours where the students have had an opportunity to see demonstrated the principles studied in class. In very few cases was pilot flight training offered. This course has been found in the schools since the late 1920's. During the war years it was found in an estimated 40%-50% of the nation's schools. In the postwar years, as schools discontinued wartime pre-induction courses, the science of aeronautics course was eliminated from many; today it is found in less than ten percent of the nation's secondary schools. It is interesting to note that it was only in America that a science of aeronautics course was added to the secondary curriculum as a war-preparation step. In Nazi Germany and in England the principles of aeronautics were included in the science and mathematics courses. In Russia today it appears that the science of aeronautics is taught in the physics and mathematics classes of the secondary school.

The concept of aviation education that has had greatest appeal in education is that aviation should be integrated into the curriculum at all grade levels and subject areas. The growing number of school officials and classroom teachers who are accepting the concept of integrating aviation into their programs are motivated by their appreciation of the importance of aviation's social implications and by their realization of the power of aviation's appeal in motivating pupils to master the three R's and the other subjects of the course of study.

This approach to aviation education through the standard curricular areas opens the way for aviation understandings reaching the minds of every student every year that he is in school. During the prewar years, a few teachers with a knowledge of aviation included aviation units, particularly in the elementary schools. However, in the last three years, this concept of fusing aviation into the curriculum has become better understood by school people, particularly through the missionary work of the aviation education services of the C.A.A., the airlines, and Link Aviation, and, recently, the U.S. Office of Education.

Interest of Industry, State and Federal Governments

Allusion has been made to the interest and effort in aviation education of non-school groups such as air transport, aircraft industry, fixed-base operators, the Air Forces, Naval Aviation, the U.S. Office of Education, and the Civil Aeronautics Administration. Although the nature and extent of this interest is difficult to evaluate with any exact-

ness, there appears to be among all these groups general agreement on two points: first, that aviation education, if it brings to American youth an understanding of aviation's social implications, is an important element in the preparation of citizens for today's and tomorrow's world. Second, that aviation education, if it provides an insight for all of America's future citizens into the nature and problems of aviation, will break the charmed circle in which aviation people find themselves. Aviation education may be the means for aviation people to talk aviation to others than themselves. The possibilities of this process of developing an air-minded America can be glimpsed by considering just one of its many aspects: namely, the possibility of school and classroom libraries including aviation periodicals among their subscriptions in order to provide students with necessary information on current aviation developments for social studies, science, language arts, and mathematics classes.

Each of the non-school groups interested in aviation education has, of course, its own special interest. The airlines' special interest in aviation is the obvious one of developing more potential passengers. Of the airlines, United, Pan American, and TWA have had excellent aviation education services. Pan American's education school this spring however, began to reduce its activities. American had an excellent service, too, until their aviation education division was curtailed two years ago. Many of the airlines have been generous in providing courtesy hops and guided tours for teacher groups, and guided tours for pupils. The Air Transport Association of America does not have an aviation education program.

The airlines' aviation education sections, in addition to making available the usual time tables and travel brochures that school people request of airlines, have made real progress in helping teachers in matters of materials of instruction and method. They have also done much to relax the attitude of the schools toward aviation education. and to make them more receptive to bringing it to the classroom; this, in spite of an occasional eager-beaver in airline sales or public relations whose remarks raise the bugaboo of airlines' exploiting the schools. In recent years the airlines' educational services have had difficulty in justifying their existence to their parent airlines, as the tendency has been for airlines to justify promotional expenditure in terms of an immediate return in passenger miles flown.

The aircraft, engine, and accessory manufacturing industry has shown very little substantial interest in aviation education, although because of the billions of public money spent on aircraft manufacture it has perhaps more to gain from public understanding than have other segments of aviation. The only industry with an aviation education service is Link Aviation, Inc., which provides the schools with splendid instructional materials and first-rate consultant services. Elsewhere in the industry, the manufacturers have provided occasional speakers. guided tours, courtesy hops, and public relations brochures and pic-

tures. Very little material of specific use for the schools has been published by the industry. The Aircraft Industries Association has no aviation education program.

Of the major industries of the nation, the aircraft industry has shown the least interest in an educational program. The Association of American Railroads, duPont, General Motors, Westinghouse, Coca Cola, Metropolitan Life Insurance, General Electric, and General Mills, to mention a few, have effective educational services, producing helpful materials of instruction for school use. It is interesting to note that whereas the industries mentioned above are in a sense petitioners for the schools' attention and asking the schools to assist them in the development of their several instructional programs, the situation is reversed in aviation. School people interested in aviation education not only are asking the aircraft industry to provide them with instructional materials, but are also inviting the industry and other aviation interests to assist in organizing a framework of industry-school cooperation, as attempted at the Atlantic City Aviation Education Conference last February.

Although the aircraft industry has shown little interest in aviation education, fixed-base operators and state aviation officials have sensed its value and made real contributions to its progress. In spite of limited resources, individual fixed-base operators have, nevertheless, spared no effort to make successful aviation education programs held at their establishments. Guided tours, courtesy hops, and speaking engagements, on the one hand, and enthusiastic local civic support and appreciation of the schools' efforts in aviation education, on the other, have helped the program. On the state level the state aviation officials have lent their prestige and financial support to the state departments of education in the publication of aviation education curriculum bulletins. On national level the National Association of State Aviation Officials has been among the most vigorous supporters of the C.A.A.'s Aviation Education Division.

The Air Force and Naval Aviation have both recognized aviation education's importance. The Air Force and its civilian patrol have cooperated with local schools' efforts to develop their own aviation education programs, frequently assisting the C.A.A. in its work with teacher groups. The Air Force has also attempted in the schools an aviation education program of its own through the Civil Air Patrol organization. Naval Aviation, on the other hand, recognizing the fundamental hesitancy of Americans to bring the military too close to their schools, has directed its entire energy into supporting the schools' programs and the efforts of agencies such as the C.A.A., promoting these programs.

Organized labor until recently has shown next to no interest in aviation education. At the recent Atlantic City Conference, the C.I.O., although invited, sent no representative. The A. F. of L., on the other hand, was well-represented. The Report of the Labor Section of this

Conference, one of the first statements of Labor's interest in aviation education, stressed Labor's concern for youth to understand the social implications of aviation. It also pointed out the danger of flooding the labor market should the government embark on an aviation mechanics training program in an effort to implement the recommendation of the Congressional Aviation Policy Board's Report calling for a reservoir of trained manpower.

On the national level of civil government, the Civil Aeronautics Administration, the U.S. Office of Education, and the U.S. Weather Bureau have shown some interest in aviation education.

The C.A.A.'s Aviation Education Division, organized in 1942, has a small Washington office and a representative in each region, and has been most active in the development of aviation education. Much of the progress of aviation education in teacher training institutions, in state and local curriculum programs, and in national education associations can be attributed to this division's missionary work. It operates under the section of the Civil Aeronautics Act of 1938, calling for the Civil Aeronautics Authority to foster and develop civil aviation.

Although given excellent cooperation by C.A.A.'s operating branches of Safety and Airways, and by some of the Regional Administrators, it has had a difficult time at the hands of other elements of the Administration in carrying out a realistic publications program and in operating with a qualified staff of adequate size.

During the war, the U.S. Office of Education made a distinct contribution with its promotion of trade training in aviation mechanic skills. Two years ago it created an office for a specialist in aviation education. At that time the Office of Education's interest was primarily in terms of aviation as a science. In recent months, however, it has noted school people's interest in aviation's implications for society and also aviation's possibilities for motivating pupils' school work.

The U.S. Weather Bureau has assisted in aviation education's efforts to give students an understanding of the science of weather. It has made generally available a kit of its publications, has opened its facilities for visits, and provided its personnel for lectures. It has no education service of its own.

Teachers Accept Aviation Education

Among school people the acceptance of aviation education has been considerably greater than among aviation people. School people who favor aviation education see its contribution in the light of social implications, modern teaching methods, and curriculum enrichment. This vision of aviation education's possibilities has taken hold to the extent that over thirty states have published curriculum bulletins in aviation education; and seventy or more teacher training institutions for the past three summers have offered aviation education courses for teachers. In the spring of 1949 the American Association of Colleges for Teacher Education appointed an Aviation Education Committee.

At the same time the American Association of School Administrators appointed an Aviation Education Committee, the report of which led to the Atlantic City Aviation Education Conference. This interest of school men in aviation education is most encouraging and much greater than was hoped for three or four years ago.

Although there has been substantial progress in the schools' acceptance of aviation education, there is still considerable resistance on the part of some, and considerable caution on the part of the majority. There are those who speak of the "hot air age." There are others in considerable numbers who wonder how aviation education's proponents propose to handle the problems of teacher training and instruction materials, even though the method and curriculum problems may have been solved.

The Textbook and Instructional Material Problem

Perhaps, the crucial point in the schools' development of aviation education is that of materials of instruction; that is, textbooks, reference books, pamphlets, brochures, pictures, films, and filmstrips. Surprising as it may seem to the layman, the standard textbook treatment of aviation is simply not adequate. The textbook publication lag is such that it has not and may never catch up to the fast-moving tempo of aviation's development, particularly on the social implications side.

Another factor that hampers the textbook's publication of adequate aviation information is the inability of the author who writes a standard text in such fields as social studies, reading, science, and mathematics to keep up with contemporary developments in every area of his field; one of these special areas is, of course, aviation. It may not be too difficult for the writer of a science text to follow the progress in areonautical science; this has been well handled by the press. However, for the author of a social studies text, even for one who has better than a layman's grasp of the social, political, economic, and international aspects of aviation, his task of adequately treating aviation's problems and institutions is almost insurmountable. An indication of its nature can be seen when one asks how frequently he has seen the U.S. airpower discussions of the past two years treated by the aviation press in terms of the principles enunciated in the President's and Joint Congressional Air Policy Reports. One has read plenty about the air power controversy between the Air Forces and the Navy, about the merits of the B-36 and the big carrier, about the generals vs. the admirals — all good human interest stuff — but very little about the fundamental issues of air policy.

One can further ask himself how frequently and how fundamentally has the aviation press discussed the ICAO, the Air Coordinating Committee, the aviation issues in the development of a national transportation policy, the evolving philosophy of state-federal relations in aviation. These are significant institutions and areas of development in aviation, but few in America know of them.

Of course aviation is finding its way into the school texts. History books have pictures of B17's, prewar DC3's, a sentence or two on the Wright brothers, and a few sentences on Pearl Harbor and the bombing of Japan and Germany. Geographies picture the aszimuthal equidistant projection and carry two or three pages explaining "air-age map projections" and great circle routes. Graded classroom readers range from Billie and Johnnie going to an airport, to accounts of aircraft uses in South America, to the poetry of aviation, usually including Tennyson's "Locksley Hall" with its "argosies of magic sails" and its "nations' airy navies grappling in the central blue," and Magee's "High Flight." The postwar geometry book have begun to include dead reckoning, and the postwar texts in science are introducing principles of aerodynamics and meteorology. But this is not what the teacher wants if he is to make aviation the center of pupil interest and build around aviation several weeks of activity, or if he is to use the pupils' natural interest in aviation to enliven the teaching of other material and concepts.

What the teachers who wish to give aviation a central place in their program need is colorful, up-to-date pictures, booklets, and explanatory brochures suitable for the several grade levels; the latest official reports of government committees and agencies; and the testimony before Congressional committees and Congressional Committee reports. With history in the making in contemporary aviation, even the dullest of pupils and the most difficult to interest in the classroom catch the spark and take fire when aviation is introduced.

The problem, however, is that the up-to-the-minute materials produced during World War II and the early postwar years by governmental agencies and aviation's non-school interests have gone out of print and are becoming dated. The industrial and commercial sources that produced them have either discontinued publishing school materials or curtailed this activity, and the governmental sources are not publishing the quantity of items they previously printed and had available for distribution.

The layman who looks back over twenty-five or thirty-five years to his school experience has difficulty visualizing the place of aviation education in the curriculum and the need for supplementary instructional materials beyond the basic texts. Except for the few specific mechanic training courses and science of aeronautics courses of the secondary schools, aviation education cannot be compared to the traditional subjects of the curriculum, such as reading, spelling, arithmetic, history, mathematics, or science. Aviation education's position is more nearly comparable to that of such areas as health, safety, atomic-energy education, and United Nations education. In the case of these, the effort is made by their proponents both in and out of the school to integrate pertinent materials at every possible point in the twelve grades. The supplementary texts, visual aids bulletin, and other teaching materials are provided in abundance. Their producers include

insurance companies, automobile manufacturers, foundations, associations, and government agencies.

The other problem facing the schools, that of teacher training, is dependent to a considerable extent on the availability of materials of instruction. The C.A.A.'s summer workshop programs of the past three or four years showed that the mechanics of the job of bringing aviation education to America's teachers can be handled. For two or three summers the C.A.A. succeeded in organizing 70 or more aviation education courses in the nation's teacher training institutions, including 3,000 to 5,000 teachers each year. This is a signifificant beginning, but the main task lies ahead; there are hundreds of thousands of teachers, many of whom want to know something about aviation.

The related areas of curriculum and method, fortunately, in themselves present no difficulties, if the problems of instructional materials and teacher training can be met. Thanks to the work of the C.A.A. and the basic studies it has published, plus the contributions of United Air Lines, Pan American World Airways, Trans World Airlines, and Link Aviation, the methods for integrating aviation into the school programs have been and are being worked out

Future of Aviation Education

The future of aviation education from the point of view of its acceptance in the schools of the nation depends on the availability of instructional materials. The organized profession, both on the local and state school levels and on the national organization level has shown surprising hospitality to the idea: it has been and still is working out problems of teacher training, methodology, and curriculum. When it saw it could not handle the materials of instruction problem alone, it called on the non-school interests thought to be concerned with aviation education as evidenced by the Atlantic City Conference, for a cooperative effort at its solution.

On the other hand, the non-school groups that have demonstrated or might be expected to demonstrate an interest in aviation education have tended to hold back. The airlines are curtailing their publishing and consulting services in aviation education; the aircraft industries continue to watch the program without participating. The civil government agencies with the above-noted exceptions are indifferent to the aviation education idea. The military services, however, seem to be giving more attention to aviation education. The fixed-base operators and State aviation officials seem to be sold on the importance of aviation education. Unfortunately, of the above groups that are in the position to contribute most to the aviation education idea, particularly through providing the needed support and materials of instruction, there is the least interest.

As has been pointed out above, instructional materials are the *sine qua non* of an educational program. If they are not forthcoming,

there can be no expanding future to aviation education and the recent ground gained in the schools will be lost. School people who take an interest in aviation education will be disappointed as they see distinct educational and social values in the program.

If aviation's non-school interests really do sense a value for aviation in the schools' efforts to make air-minded future generations of America's citizens, then it behooves the public relations staffs of aircraft manufacturing and air transport to take a leaf out of the book of other industries and produce instructional materials for schools. For the governmental agencies it means publishing aviation documents in sufficient quantity to be available to the schools of the nation, and it has been observed that these agencies do give serious thought in matters of publication volume and distribution to the values of the more vocal and more powerful of the non-governmental groups.

Aviation education, like aviation, is here to stay. Whether it produces "an air-faring nation" and a generation of youth capable of understanding the implications of "a shrinking world" depends upon the support it receives from aircraft industry and air transport.

DECLARATION OF POLICY AND RESOLUTIONS ADOPTED BY THE NATIONAL AVIATION EDUCATION CONFERENCE AT ATLANTIC CITY IN FEBRUARY, 1950

POLICY

1. The broad concept of education includes teaching for democratic living under the conditions and circumstances of the times.
2. The impact of aviation upon living compels its recognition as an important factor in the social, political and economic conditions and circumstances of our time—and in our National Security.
3. Organized education should include aviation and its implications as a part of—and an aid to—its regular processes of instruction.
4. Industry, Labor, Government, and Organized Education should cooperate, through a National Aviation Education Council, in the development and guidance of a comprehensive program of Aviation Education.

RESOLUTIONS

1. That there be established a National Aviation Education Council.
2. That the NAEC shall be an advisory body whose membership shall be widely representative of Education, Labor, Industry, Government, and other national organizations interested in aviation education.
3. That an Organizing Committee be selected by this Conference, including three representatives each of Industry, Labor, Government, and other national organizations interested in aviation education, and nine representatives of educational associations for the purpose of determining the number and method of selecting members of NAEC and of defining its functions.
4. That the NAEC Organizing Committee shall meet as promptly as possible, and that it report to the next meeting of the National Aviation Education Council.
5. That the Aviation Education Division of the Civil Aeronautics Administration act as the Secretariat of the Organizing Committee and of the NAEC until deemed expedient to make other arrangements.

SAFETY REGULATIONS AND ACCIDENT INVESTIGATION: JURISDICTIONAL CONFLICTS OF C.A.B. AND C.A.A.—PART II*

By EDWARD C. SWEENEY

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REORGANIZATION PLANS OF 1950

THE statutory responsibilities of the Civil Aeronautics Board and the Administrator of Civil Aeronautics were reviewed in Part one. On May 24, 1950, Reorganization Plans Numbers 5, 13 and 21 of 1950 became effective. Plan No. 13 was designed to strengthen the internal administration of the Board by making the Chairman, rather than the five-man Board as a whole, responsible for its day-to-day administration.[1] Plan No. 5 transferred to the Secretary of Commerce all functions of the Administrator of Civil Aeronautics and of the Civil Aeronautics Administration, thus centralizing in the Secretary full respon-

* Continued from Spring issue of JOURNAL, 17 J. Air L. & Com. 141 (1950). Portions of Staff Report on the Civil Aeronautics Board submitted to the Commission on Organization of the Executive Branch of the Government, September-November, 1948.

[1] Reorganization Plan No. 13 of 1950 reads: "SECTION 1. *Transfer of functions to the Chairman.*—(a) Subject to the provisions of subsection (b) of this section, there are hereby transferred from the Civil Aeronautics Board, hereinafter referred to as the Board, to the Chairman of the Board, hereinafter referred to as the Chairman, the executive and administrative functions of the Board, including functions of the Board with respect to (1) the appointment and supervision of personnel employed under the Board, (2) the distribution of business among such personnel and among administrative units of the Board, and (3) the use and expenditure of funds.

"(b) (1) In carrying out any of his functions under the provisions of this section the Chairman shall be governed by general policies of the Board and by such regulatory decisions, findings, and determinations as the Board may by law be authorized to make.

"(2) The appointment by the Chairman of the heads of major administrative units under the Board shall be subject to the approval of the Board.

"(3) Personnel employed regularly and full time in the immediate offices of members of the Board other than the Chairman shall not be affected by the provisions of this reorganization plan.

"(4) There are hereby reserved to the Board its functions with respect to

sibility for all the activities of the CAA.[2] Reorganization Plan No. 21 effected a basic reorganization of the United States Maritime Commission and established an Under Secretary of Commerce for Transportation, to perform such duties as the Secretary of Commerce shall prescribe.[2a] This plan created a new three-man Federal Maritime Board within the Department of Commerce for housekeeping purposes, stripped of most administrative responsibility, but with specified regulatory powers to be exercised "independent of the Secretary." The CAB and the Department have had this relationship since the Reorganization Plans of 1940.[2b] Plan 21 also created a new Maritime Administrator, responsible to the Secretary of Commerce, like the Administrator of Civil Aeronautics, but provided that he would also be the Chairman of the new Federal Maritime Board. As this is the most recent and drastic reorganization of an independent regulatory commission, the precise relationship between the new Maritime Board and the Secretary of Commerce, especially the division of responsibilities relating to the award of subsidies for ship construction and operation, are being watched closely by aviation interests.[2c]

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revising budget estimates and with respect to determining upon the distribution of appropriated funds according to major programs and purposes.

"SEC. 2. *Performance of transferred functions.*—The Chairman may from time to time make such provisions as he shall deem appropriate authorizing the performance by any officer, employee, or administrative unit under his jurisdiction of any function transferred to the Chairman by the provisions of this reorganization plan."

[2] Reorganization Plan No. 5 of 1950—Department of Commerce: "SECTION 1. *Transfer of functions to the Secretary.*—(a) Except as otherwise provided in subsection (b) of this section, there are hereby transferred to the Secretary of Commerce all functions of all other officers of the Department of Commerce and all functions of all agencies and employees of such Department.

(b) This section shall not apply to the functions vested by the Administrative Procedure Act (60 Stat. 237) in hearing examiners employed by the Department of Commerce, nor to the functions of the Civil Aeronautics Board, of the Inland Waterways Corporation, or of the Advisory Board of the Inland Waterways Corporation."

[2a] Reorganization Plan No. 21 of 1950, Section 301.

[2b] See page 142 of Part one, 17 J. Air L. & Com. 144 (1950).

[2c] In response to an inquiry of Senator Warren G. Magnuson, Chairman of the Subcommittee on Merchant Marine and Maritime Matters of the Interstate and Foreign Commerce Committee, the Secretary of Commerce, Charles Sawyer, went into significant detail in a letter of April 14, 1950. He wrote:

"In your letter you asked for my views on certain aspects of the transfer of the functions of the Maritime Commission under Reorganization Plan No. 21 1950. This Plan establishes a Federal Maritime Board and a Maritime Administration in the Department of Commerce.

"The Board would have two principal functions: regulatory powers relating generally to rates and services, to agreements among carriers, and to trade practices; and powers to award subsidies for the construction and operation of ships. The other functions now lodged in the Maritime Commission would be transferred to the Secretary of Commerce, subject to delegation to the Maritime Administrator, who would also be the Chairman of the Board.

"In the exercise of its regulatory powers over rates and services, over agreements between carriers, and over trade practices, the Board would, under Section 106 of the Plan, be independent of the Secretary of Commerce and would be free to report directly to the Congress. The present independence of decision enjoyed by the Maritime Commission would, therefore, in all respects be continued in the Board, with respect to these quasi-legislative or quasi-judicial regulatory functions.

"If, in the exercise of these functions, the Board should wish to avail itself of any of the facilities of the Department, I should of course be glad to see that the Board is accorded full cooperation. However, such cooperation would not, in my opinion, interfere with the independence of the Board in the exercise of

Should Responsibility for Issuance of Safety Regulations Be Transferred to CAA?

It has been shown in Part one that the Civil Aeronautics Board promulgates the Civil Air Regulations. The Administrator of Civil Aeronautics implements Board action by carrying out the primary duties of administration and enforcement. Aircraft safety regulations are voluminous and technical and include safety standards of all kinds. They are designed to insure safety for aircraft, airmen and air navigation.

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its regulatory functions. On the contrary, the decisions of the Board on regulatory matters would be made with complete independence, on the basis of the facts before the Board, subject only to court review. Its consideration of regulatory problems would not be subject to supervision or control by the Department, and its decisions would not be subject to review, or approval, or reversal by the Secretary or the Department. This method of operation has been found satisfactory in the case of the CAB, and I foresee no difficulty in applying the same principle to the regulatory functions of the Federal Maritime Board.

"In the exercise of the powers with respect to the award of subsidies which are delegated to the Board by the Plan, the Board is to be guided by the *general policies* of the Secretary of Commerce, under Section 106 of the Plan, but its actions with respect to making, amending, and terminating subsidy contracts under Section 105(1) are to be final.

"This aspect of the Plan appears to me to be both appropriate and practicable. This arrangement facilitates and ensures coordinating the subsidy program with the programs and general policies of the Executive Branch relating to national defense and the national transportation program. At the same time, it leaves to the independent judgment of the Board the determination of the individual concerns which are to receive the subsidy contracts and the amounts of the individual subsidies.

"I should like to make it clear that under the Plan the Secretary has no authority either to award a subsidy or to direct the action of the Board on a subsidy application. Here again, I would expect full cooperation between the Board and the department: The Department will need the views of the Board in establishing general policies for the subsidy program, to ensure that the general policies will be workable and realistic; the Board may, on occasion, wish the views of the Department with respect to the application of the general policies. Cooperation and consultation of this sort need not, and I am convinced will not, affect the ability of the Board to make final decisions with respect to making, awarding and terminating individual subsidy contracts, decisions which will not, under the Plan, be subject to review or reversal by the Secretary.

"Under the Plan, the Federal Maritime Board is to be an agency within the Department of Commerce. This status does not, in my view, give the Secretary or Department any authority over the regulatory functions which the Board is to exercise independently, nor does it give the Secretary or the Department authority to alter or reverse the actions of the Board with respect to those subsidy functions as to which its actions are final."

"At the present time I am not prepared to make any proposals for fundamental revisions of the basic shipping legislation. I propose, if the Plan takes effect, to make a thorough review of the present merchant marine program, and if it appears from this review that changes in legislation would make the program more effective, I would submit for Congressional consideration recommendations for appropriate changes in the present laws.

"Until careful studies have been made it would not be possible to indicate the precise place which promotion of the merchant marine should have in an overall Federal program for transportation. As I indicated in my report to the President, I am strongly in favor of the national transportation policy set forth in the Transportation Act of 1940, which provides for the recognition and preservation of the inherent advantage of each form of transportation and the promotion of safe, adequate, economical, and efficient service as well as the fostering of sound economic conditions in the field of transportation. I am convinced that adherence to this policy in domestic transportation will result in a flourishing domestic fleet available for use by the commerce of the United States. I also recognize that, because of our higher costs, subsidies are necessary for merchant shipping operating in international trade, if we are to remain a major

Whenever one agency must take a comprehensive set of technical regulations issued by another and implement and enforce them, there are bound to be contructions placed upon the regulations not intended by the promulgating agency. Enforcement policies ultimately determine what regulations really mean in practice. These differences have occurred and given rise to friction and misunderstanding among the staffs of the CAB, the CAA, and representatives of the aviation industry.

To minimize misunderstandings in interpretations and to facilitate amendments to the Civil Air Regulations, a special CAA-CAB Coordinating Committee was established in 1946. It has helped to bring the staffs together and resolve differences of opinion. Techniques of working together have now become acceptable and the committee machinery is coming into disuse.

It has been mentioned that the aviation industry and the Administrator have stated that they consider the present Civil Air Regulations too voluminous and too detailed and recommend that they be revised and simplified. What is needed, it is stated, is for the Board to change drastically its basic approach towards safety regulation and restrict its regulation to major policies affecting safety. It is not entirely clear from the representations made by the Administrator to the Board in 1948 whether his supplemental rules and Operations Manuals are to be simplified and generalized as well as the Board's Civil Air Regulations. To give genuine recognition to self-regulation by manufacturers, airlines and other parts of the industry, the CAA should also relax many detailed regulations and procedures.

The Board is not opposed to simplification and has for some time announced a policy of permitting industry greater self-regulation and participation in formulating improved operational practices. Progress along this line appears intolerably slow. The Board has stated its intentions to revise extensively many of the Parts of the CAR's. The delay may in part be due to the great size of the undertaking and to the extremely small staff undertaking to plan, study and draft the revisions, as well as an attitude that speed should always be sacrificed to accuracy.

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shipping power and if our merchant fleet is to make an adequate contribution to national defense.

"Your letter also inquired as to the general policy contemplated as regards the respective spheres of authority of the proposed Maritime Administrator, the Under Secretary for Transportation, and myself.

"The Maritime Administrator would be responsible for the operations of his agency and would be vested with suitable authority to fulfill that responsibility. While the Department requires adherence to certain administrative standards and practices in the interests of economy and progressive management, it is my policy to give operating bureau wide operating latitude. This policy would apply to the Maritime Administration, in conformance with the administrative pattern of the Department prevailing with respect to the Bureau of Public Roads, Civil Aeronautics Administration, and other major agencies."

Proposals to Concentrate Authority in One Agency

Opinions differ widely as to the need for organizational changes in the safety regulation field. The Department of Commerce has urged that promulgation of rules should be transferred to the CAA so that the single agency in daily touch with the problem could make, interpret and enforce the regulations and keep them up to date.[3] It is asserted that this method will promote efficiency and recognize the primary technical nature of the Civil Air Regulations. The President's Air Policy Commission sponsored this recommendation (Report page 135).

The Congressional Aviation Policy Board, on the other hand, recommended that the CAB should administer and enforce the safety regulations as well as make them, and that the staff of the CAA administering the regulations should be transferred to the CAB and placed under the supervision of an Executive Director who would be subject only to policy supervision by the Board (Recommendations, Nos. 82, 84 and 89).

The CAB concurred generally in this recommendation and points out that the Civil Air Regulations often have far reaching economic affects and should therefore, be made by the agency primarily responsible for the financial welfare of air carriers.[4] Since many safety regulations involve flight restrictions or add weight to the aircraft, their economic effect is evident. For example, if the Board amends the regulations to require a third crew member on large 4-engine equipment, the payroll weight and engineering expense will be substantial. Since, in the last analysis all aircraft safety is relative, the expense of safety requirements plays an important role with carrier management.

The Congressional Policy Board suggested, however, that the Federal Airway Service in the Department of Commerce should make the rules for the operation of the airways and airport traffic control facilities as distinguished from all other rules related to the economic operation of aircraft and air services in flight and on the ground. This distinction appears to be too nebulous and would certainly lead to frictions between the CAB and the Federal Airway Service.

Either of these would concentrate the rule-making power in one agency. Through day-to-day administrative experience this agency would acquire an intimate knowledge of the technical aspects of regulations and their important economic implications. Thus, both proposals would cure the evil of the present duality and permit one responsible agency to simplify and modernize the CAR's.

In passing, it should be mentioned that when the Civil Aeronautics Act was under consideration in 1937 one of the proposals seriously considered was to give the ICC safety as well as economic regulation of

[3] See Hearings on H.R. 6144 before House Interstate and Foreign Commerce Committee, 80th Cong., 2d Sess., April 20, 1948, especially statement of Wm. C. Foster, Under-Secretary of Commerce, page 28, *et seq.*

[4] See Hearings on H.R. 6144, statement of Joseph J. O'Connell, CAB Chairman, page 71, *et seq.*

commercial carriers, with the Department of Commerce retaining safety regulation of private fliers. In practice, air carrier and private flying regulation are separated in form in the Civil Air Regulations and the administration and enforcement of the two areas of regulation are handled by different CAA personnel. As non-commercial flying increases in volume its problem will require greater decentralization and administration at the state level, but at this time this proposal would not seem desirable with the common use of airports, airway facilities and traffic control by all classes of aviation and the need for uniform traffic control.

The aviation industry and witnesses before the two policy committees and on the legislation considered by Congress appear to be divided upon the merits of whether the CAB or the CAA should be the agency to be given the entire responsibility for promulgating and administering safety regulations. While there is general concurrence that one agency should handle both the rule-making and administration of safety regulations, there is also recognition of the need for a disinterested body representing the public to pass upon proposed regulations about which government engineers and the industry are not in agreement.

Public Law No. 872, approved July 1, 1948, is a step in this direction. It provides that the CAB may authorize the Administrator to make such safety regulations as the Board deems desirable and that the Board may provide for discretionary review of CAA proposed regulations.

The law does not specify what responsibility CAB retains after delegating rule-making authority to the Administrator, i.e., whether it is obligated to retain a staff to judge the adequacy of CAA's rule-making and to withdraw the delegation when it disagrees with CAA policy.

Recommendations to Hoover Commission's Committee on Regulatory Commissions

The foregoing discussion appears to establish the desirability of centralizing responsibility of both the rule-making and administration functions of safety regulations in one agency. This is because of their technical nature, the need for daily intimacy with changing industry techniques, facility for prompt amendments and centralization of responsibility. To require two agencies to work so closely together as is necessary for a rule-making agency dependent upon a second agency for a great share of its technical advice and competency invites clashes which impede progress. This should be avoided if possible. This objective can be accomplished by transferring the responsibility for promulgating all Civil Air Regulations to the CAA.

Secondly, when industry and the CAA do not agree, provision should be made for final decision by a disinterested competent body which can balance safety and economic responsibilities. This appeals

body would need only a small staff of technical advisors. While industry may tend to appeal any proposed regulation which imposes greater financial and technical burdens, if only to delay enactment, it is believed that this provision for appeal to a separate agency is preferable to merely leaving the matter to publication and hearing pursuant to the Administrative Procedure Act. While every appeal may be interpreted as an attack on a safety measure on economic grounds, this must be recognized as a real issue involved in most new regulations that cannot be avoided or concealed by government.

This second objective can therefore best be achieved by a provision that when a proposed regulation is published by CAA in accordance with the Administrative Procedure Act, interested parties may petition for discretionary review by the CAB.

These changes may be accomplished under Public Law 872 with the full cooperation of CAB, or better, by specific amendment to the Civil Aeronautics Act.

Finally, it is recommended that the philosophy of safety regulation for civil aviation by all agencies of the Federal Government be drastically changed by revising the Civil Air Regulations both as to form and scope in order to begin a gradual generalization of safety regulations with the ultimate objective of placing responsibility for detailed operating procedures and practices directly on the aviation industry.

Should Responsibility for Enforcement of Civil Air Regulations Be Transferred to CAA?

The Reorganization Plans of 1940 left an unsatisfactory division of responsibility between the Board and the Administrator in regard to enforcing Civil Air Regulations. Briefly, the Administrator is the primary enforcing agency with a field staff charged with apprehending and reporting violations and acts as prosecuting agent before a CAB Hearing Examiner in suspension and revocation cases. He is invested with power to reprimand a violator, to compromise a civil penalty or to deny an application for renewal of a certificate, while the Board is vested with the power to suspend or revoke the violator's certificate of competency.

In a given case the Administrator may consider that the violator's certificate should be suspended and when it reaches the Board for decision on the suspension it may consider that a civil penalty was more appropriate. Theoretically, proceedings to suspend a certificate do not prevent the Administrator from also threatening to collect a civil penalty, or on the other hand, to issue a new certificate to a violator as soon as the Board has suspended a previous one, thus nullifying the action of the Board.

Delay: In practice the most serious objection of the Board's handling of suspension and revocation cases is the undue length of time it

takes the Board to process decisions, and the complete lack of personal interest shown in such proceedings by Board members. Many of the airmen suspension cases, such as a student pilot carrying a passenger contrary to regulations, are minor in nature. In many such cases the Examiner has recommended a suspension of the pilot's privileges for 30 to 60 days, but the decision usually does not become effective until a year or more after the offense occurred. This is inexcusable.

Dual Authority: In addition to delays, experience indicates two fundamental difficulties in the present enforcement procedure. The first is that two separate groups of hearing officers (the Board's Examiners and CAA staff) are authorized to hear and impose different sanctions: neither is bound by the other's decision and each has jurisdiction over only one sanction.

Denial of Hearing: The second is that in practice the violator is denied an opportunity of having the civil penalty heard and determined by an independent tribunal. The choice presented to the alleged violator is either to pay the compromise penalty offered by the CAA, usually in an amount under $100, or to have the issue tried before a United States District Court in a $1,000 civil penalty action. Since to defend the action would cost the alleged violator more in time, attorney fees and costs, than to pay the compromise, an innocent airman may be forced to accede to the Administrator's suggested compromise. This procedure has been the basis of complaints by airmen and aeronautical associations.

Proposals for Local Enforcement of Safety Regulations

Both CAB and CAA recognize that enforcement of Civil Air Regulations with respect to flight activities of non-commercial pilots and local operators is essentially a local problem and that as much as possible of the enforcement responsibility for this class of flight activity should be turned over to local and State officials as soon as possible.

The President's Air Policy Commission (Report, page 126) and the Congressional Aviation Policy Board (Recommendation 24 (b)) recommended that federal statutes be amended to give State Courts and agencies concurrent jurisdiction to adjudicate violations of the Civil Air Regulation which did not involve certificated air carriers.[6]

Hearings were held in May, 1948, on legislation to carry out this recommendation. Serious differences of opinion were brought out at these hearings as to how far the State courts should be authorized to go and as to the best methods of meeting procedural problems.[7] Should State jurisdiction be extended to revocation of federal certificates as

[6] See comprehensive discussion of this problem by Louis E. Black, Jr., "Uniformity in Air Safety Regulation; Cooperative Federalism Applied," 15 JOUR. AIR LAW & COM. 181 (1948).

[7] See Hearings on H.R. 6147, "Local Enforcement of Safety Regulations" before House Interstate and Foreign Commerce Committee, May 4, 1948, and hearings on S. 2452 before Senate Committee on Interstate and Foreign Commerce on May 17, 1948.

well as civil penalties? State officials asserted that criminal procedure would be the only effective procedure for them to follow. That basically the only additional authority they need would be authority to suspend the exercise of federal pilot certificates of competency for limited periods of time for violations involving "stunt" or reckless flying.[8] The entire subject is undergoing further study by interested groups under the sponsorship of the CAA and State aviation officials.

Proposals to Improve Federal Enforcement

A number of proposals have been made to better correlate enforcement procedures between CAB and CAA if the entire responsibility for safety rule-making and enforcement is not assigned to one or the other of the agencies.

The Board has recommended that both civil penalty and suspension proceedings be handled by the Board's Examiners with a right of appeal to the Board in suspension or revocation cases as at present, and to the District Court in civil penalty cases. This procedure would relieve the CAA from passing judgment on violations it uncovers and prosecutes, but would greatly increase the responsibility of the Board and might further delay the handling of cases.

The Administrator has refined this proposal by recommending that CAB safety Examiners should be designated as commissioners of the Federal District Courts like the commissioners designated to hear petty crimes in the National Parks and federal territories (18 USCA 576a). This would give the Examiner power to determine civil penalties in a judicial manner and would provide a more expeditious appeal procedure to the Federal Courts.

Recommendations to Hoover Commission's Committee on Regulatory Commissions

It is suggested that the proposal recommended by the Administrator be adopted; that each United States District Court appoint an Aviation Commissioner from among the Safety Hearing Examiners employed by the CAB. Depending on the work load the same Examiner might be designated to act as commissioner in two or more districts. He should have jurisdiction to hear and act upon all actions for monetary penalties and actions to suspend or revoke all classes of safety certificates.

In the event of finding of a violation the Commissioner could impose a civil penalty up to $1,000, or suspend any air safety certificate issued to the violator, or both. An appeal would lie from his judgment imposing a civil penalty to the District Court, and from his judgment suspending or revoking a certificate to the CAB from whose decision

[8] See Statement of National Association of State Aviation Officials in regard to H.R. 6147, reprinted in 15 JOURNAL OF AIR LAW AND COMMERCE 325 (Summer issue, 1948).

an appeal could ultimately be taken to the Circuit Court of Appeals. The right of an accused to demand a trial by jury of any issue of fact, if the value in controversy exceeds $20, must be recognized and provision made for such trials before the District Court.

The proposal should provide for bringing complaints in two ways: (1) they would be brought in the name of the United States and prosecuted by the Administrator under the direction of the Attorney General, (2) the law enforcement officers of any State could file and prosecute complaints arising out of violations within that State of the federal Air Traffic rules governing the navigation of aircraft, safe altitude of flight, and the prevention of collisions, unless the alleged violator is operating an aircraft under the terms of an air carrier operating certificate. With respect to the specific violations mentioned in (2) above, consideration should be given to amending federal laws so as to authorize state aviation authorities and courts of record to suspend federal airmen's certificates of competency for periods from 30 to 60 days.

This recommendation meets the basic difficulties outlined above. It concentrates responsibility in one set of Examiners upon whom responsibility for delays may be fixed. It provides for an impartial tribunal to impose a fixed monetary penalty, civil in nature, about which there would be no negotiation or bargaining. In addition, the proposal realizes the objective of utilizing state enforcement personnel in the handling of violation cases of local concern to reduce the number of federal employees and widen the base of violation detection.

Should Responsibility for Aircraft Accident Investigation Be Transferred to an Independent Air Safety Board?

Importance of Air Safety

No activity of the federal government with respect to civil aviation attracts more public interest than the investigation of aircraft disasters and the publication of the causes thereof. Fear of injury in aircraft accidents, which is both real and exaggerated, is one of the serious deterrents to wide-spread public acceptance of air transportation. The public appears to be more interested in commercial aircraft safety than they are in the regularity, frequency or comfort of the service.

Accident-free operations are fundamentally the result of careful operating practices on all levels — this includes aircraft construction, maintenance, ground dispatching and pilot technique — all operating personnel on every air carrier must vigilantly promote safety.

Public accident investigation hearings tend to take the mystery out of aircraft accidents and to let the public know what really happened and that effective measures can and are being taken to prevent recurrence. Investigations focus attention upon the breaks in safe operating procedure so that corrective steps may be taken to prevent future accidents.

Defects of Present Organization

In the field of aircraft investigation there are two organizational problems that require attention. The first involves duplication in field investigations between the Board and the Administrator, and the second involves securing impartiality of accident investigation and determination.

Duplication: As has been shown, as part of the Administrator's normal enforcement duties, his field staff investigates more than 90 per cent of all aircraft accidents to determine whether there have been violations of the Civil Air Regulations. The Board, on the other hand, has the specific statutory duty of both investigating and determining the causes of these same accidents. The Board has never had the appropriations to investigate all accidents and has never considered that this was necessary in order to ascertain the probable cause of many accidents. In order to accomplish the most with its staff the Board investigates and reports on only the more disastrous accidents and those for which the cause of the accident is obscure and therefore show a likelihood of revealing possible corrective measures. It usually invites the CAA to participate in its field investigations.

This arrangement has caused duplication and at times friction between the staffs with regard to their respective duties at the scene of accidents and at hearings. It is undesirable for two groups of technicians representing the federal government performing similar investigation services in the field at the same time. However, the investigation of an accident and the public hearing to determine the cause thereof are inseparably a part of the same inquiry. Should the Board hold public hearings to determine the causes of aircraft accidents without making its own investigation, it would have to rely solely upon the facts developed by the CAA. Thus, the Board would be limited in its findings to that evidence developed solely by that agency; and by virtue of the Administrator's responsibilities, it is possible that essential evidence pertinent to the investigation of an accident might not become available.

Should the CAA be assigned the responsibility for on the spot investigations of aircraft accidents, that agency would be placed in the position of investigating itself, reporting itself, and making recommendations to itself for corrective or preventive action wherever the CAA was the responsible agency for approving the matter under investigation. For example, since World War II, in the air carrier field, four new types of transport aircraft have been placed in scheduled air carrier service. Three of these types developed major defects, which resulted in several disasters in which many lives were lost. Each of these aircraft were certificated as airworthy by the CAA. Defects in the aircraft were not disclosed until after a disaster had occurred and were then brought out and made public by a thorough investigation of the accidents by the CAB acting independently.

Regardless of whether CAA or CAB conducted these investigations, it is desirable that technical specialists and others who have extensive experience in organizing necessary custodial, search and research facilities be available. For this reason, at least so far as the major air carrier accidents go, it is unlikely that the investigation can ever be completely decentralized. While some decentralization is now in effect, the Board's area staffs are supplemented by specialists and others from Washington, and presumably the CAA would have to follow this same technique to obtain the same competence even with its large field force and, accordingly, there do not appear to be any savings which might be derived from a transfer of on the spot investigation to the Administration.

Impartiality. The proper agency to make the field investigations raises the second question of impartiality. Since the abolition of the independent Air Safety Board in 1940 the Air Line Pilot's Association has advocated re-establishment of an independent three-man Air Safety Board.[9] The Association contends that neither the CAB, making the operating regulations, nor the CAA, administering the regulations, can be expected to impartially determine the cause of accidents.

The Association points out that accidents may occasionally be due to faulty regulations, faulty inspection, certification or operation of federal facilities, and that no Government agency will involuntarily place blame for an accident upon itself by criticizing its own judgment in performing its regulatory duties or in installing or operating air navigation facilities.

Extensive inquiries into these charges have failed to uncover any specific instance of withholding blame from itself, but the general logic of the ALPA contention cannot be refuted, but complete impartiality of the investigating agency would be desirable if consistent with other organizational problems.

Proposals for Handling Aircraft Accident Investigations

The President's Air Policy Commission recommended re-establishment of an independent Air Safety Board (Report page 138) and the Congressional Aviation Policy Board recommended appointment of an independent Director of Air Safety Investigation (Recommendation No. 2). The two recommendations differ principally in that the Congressional Board felt that accident investigation and analysis could best be handled by a single responsible individual, but each report stressed the need for impartial and thorough investigations.

Hearings held in April, 1948, on a bill to set up an independent Director of Air Safety, as recommended by the Congressional Aviation

[9] Hearings on "Safety in Air Navigation" before House Committee on Interstate and Foreign Commerce, 80th Cong., 1st sess., Part 1, p. 453, Statement and testimony of David L. Behncke, President, ALPA. See also Hearings on H.R. 5561 before same committee, 81st Cong., 2nd sess. (February 1950).

Policy Board, brought out a number of different views as to the best organization to secure impartial accident investigation.[10] The CAB Chairman did not oppose the proposal but considered it unnecessary. The Department of Commerce witness considered that the proposal showed a lack of faith in CAA and CAB officials charged with safety responsibilities and that it would create unnecessary duplication of personnel. Industry in general was indifferent except that the airline pilots strongly favor a Board of three to five specialists and consider air safety "too important to be trusted to one man."

Public Law 872, effective July 1, 1948, authorized the CAB to delegate to the CAA such duties as it sees fit with regard to accident investigation. This is intended to clarify and legalize the present role of the CAA in investigating the vast majority of accidents.

Recommendations to Hoover Commission's Committee on Regulatory Commissions

The solution of the organizational problem of securing impartiality of accident investigation is tied up with the selection of the agency that should promulgate Civil Air Regulations. It has heretofore been recommended that this function be given to the Administrator with the right of discretionary appeal in the CAB. If this recommendation is accepted then the CAB will be freed from its primary responsibility for making safety regulations.

It is recommended that the Board retain responsibility for accident "investigation" and "determination." The principle of delegating accident investigation responsibility to the CAA, as authorized by Public Law 872, with respect to minor accidents should be encouraged. In a large portion of non-air carrier accidents, because of their relatively minor significance, the CAA would be in a position to determine readily the cause of the accident. In other cases, however, the report of the accident investigation would be forwarded simultaneously to the Board for accident determination and to the Administrator for necessary enforcement and administrative action.

In carrying out its responsibilities, the Board would hold public hearings before an Examiner specializing in accident investigations, hear the reports of its investigating team, the carriers, the manufacturer, the pilot, and the general public. Upon the basis of information thus assembled the Board would make public a finding as to the probable cause of the accident.

Reasons for Recommendation. It is recognized that this is not a perfect solution to the problem of securing impartiality of accident investigation, but appears to be the most desirable of available choices. The establishment of a separate government agency or director for

[10] See hearings on "Independent Office of Air Safety," H.R. 6144, before Committee on Interstate and Foreign Commerce of the House of Representatives, 80th Cong., 2nd Sess., April 20, 1948.

the sole purpose of investigating and determining the cause of accidents would be very expensive and out of proportion to the benefits that may reasonably be expected. Such an agency would build up an extensive field staff of engineers and analysts and duplicate the field force of CAA.

Moreover, even an independent safety Board would tend to lose its impartiality in an inevitable endeavor to maintain consistency in its own recommendations. It would soon have the same interests as CAA and CAB to defend its earlier actions and to cast suspicion or blame in other directions. Finally, at times when public concern over aircraft accidents is aroused, an independent Board would be under tremendous pressure to recommend regulations which might be ultimately harmful to aviation safety.

Undoubtedly the CAB will occasionally find itself determining the cause of accidents involving regulations that it approved on appeal from the CAA. To this extent impartiality is sacrificed to avoid the expense, confusion and doubtful benefits of creating a new agency.

The emphasis in accident determinations, of course, should be less on fixing blame than on developing the chain of events leading up to the accident and on recommendations that will insure against their recurrence in the future.

Any Government agency holding public hearings and issuing accident reports should endeavor to keep the aircraft industry, CAA and the CAB alerted to criticism, and at the same time to retain public confidence that everything possible is being done for public safety. It is believed that the CAB can best do this by determining the causes of the most important and disastrous accidents by public hearings.

USE OF AIRCRAFT ACCIDENT INVESTIGATION INFORMATION IN ACTIONS FOR DAMAGES

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INTRODUCTION

THE Civil Aeronautics Board (hereinafter referred to as the "Board") investigates aircraft accidents to determine their probable cause in order to prevent the occurrence of similar accidents in the future. The question then arises as to whether the information gathered in such investigations may be used in subsequent actions for damages growing out of the accident. Section 701 (e) of the Civil Aeronautics Act of 1938, as amended [1] (hereinafter referred to as "the Act"), provides as follows:

> "The records and reports of the Board shall be preserved in the custody of the secretary of the Authority in the same manner and subject to the same provisions respecting publication as the records and reports of the Authority, except that any publication thereof shall be styled 'Air Safety Board of the Civil Aeronautics Authority,' and that no part of any report or reports of the Board or the Authority relating to any accident, or the investigation thereof, shall be admitted as evidence or used in any suit or action for damages growing out of any matter mentioned in such report or reports." [2]

It has been contended by various persons that this section extends a privilege not only to the accident reports of the Board itself, but also prohibits the testimony of Board employees in civil suits for damages and precludes the use in such suits of reports by Board employees to the Board, the transcript of the testimony and the documents used in Board accident inquiries, and copies of records and reports which have been introduced into Board accident inquiries by air carriers, aircraft manufacturers, and other persons. The exact scope and purpose of Sec. 701 (e) are at the present time the subject of great uncertainty for there is

* The views expressed in this article are the personal views of the author only and do not necessarily represent the views of the Civil Aeronautics Board.

[1] 52 Stat. 1013 (1938), 49 U.S.C. §581 (1946).

[2] The Civil Aeronautics Board now has all the powers and duties granted by Title VII of the Act to the Civil Aeronautics Authority and to the Air Safety Board. Therefore, Sec. 701(e) applies to reports of the Civil Aeronautics Board. Reorganization Plan No. IV, 3 Code Fed. Regs. p. 332 (Supp. 1940), effective June 30, 1940.

almost no valuable legislative history to aid in its interpretation [3] and, prior to the recent decision on a motion in *Tansey* v. *TWA*,[4] there was no complete, written court decision on the question. The purpose of this article is to bring together all of the scattered aids to interpretation and to answer, insofar as it is possible at the present time, the legal questions involved in Sec. 701 (e). It should be noted that this article deals only with the scope of the privilege granted by this section and does not consider whether accident information would otherwise be admissible under the rules of evidence.

Records and Testimony in Board Inquiries

The most difficult question is whether the language of Sec. 701 (e) extends a privilege to testimony taken at a Board accident inquiry and to the numerous documents and records used in a Board investigation, so that such evidence cannot be used in a subsequent suit or action for damages growing out of any matter mentioned in a Board report.[5] The first line of Sec. 701 (e) makes a clear distinction between the "records" and the "reports" of the Board and the second half of the section provides that only the "report or reports" of the Board shall be inadmissible in evidence. This distinction was pointed out as a basis for a ruling that Sec. 701 (e) applied to the Board report only and did not preclude the use of testimony from a Board inquiry to impeach a witness during the taking of a deposition for use in an action for damages. *Ritts v. American Overseas Airlines.*[6]

Two other court decisions are in accord with this ruling. In ruling on objections to interrogatories in the case of *Kendall and Sebo v.*

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[3] The only legislative history on this section is a statement by Mr. Henry Allen Johnston of the Committee on Aeronautics, Association of the Bar, New York, N. Y., to the effect that accident investigation records could not be used for any purpose in any litigation (Senate hearings on S. 3659, 75th Cong., 3rd Sess., April 6, 1938, p. 18). Since there is no evidence that Congress, or even the Subcommittee, did or did not agree with his statement, it would seem to have little or no probative value in determining the intent of Congress. Furthermore, S. 3659 did not become law and S. 3845, which eventually became the Civil Aeronautics Act, contained additional language making a clear distinction between the "records" and the "reports" of the Board. See, however, RHYNE, THE CIVIL AERONAUTICS ACT ANNOTATED (1939), p. 157.

[4] U.S. Dt. Ct. for the District of Columbia, Civil Action No. 5151-47, Feb. 3, 1950.

[5] Sec. 701(e) by its own terms does not apply to a proceeding before the Board for the revocation of a safety certificate or to any criminal prosecution. See, however, Sec. 1004(i) of the Act (54 Stat. 1022 (1938), 49 U.S.C. §644 (1946). It was probably not designed to apply to an action by the Administrator for a civil penalty, even though civil penalties are based on the theory that the government is being reimbursed for damages to it.

[6] Unreported opinion in a letter of Sept. 26, 1947 from Judge Leibell to the counsel in the case. (S. D. N. Y., Civil Action No. 40-730.) During the taking of a deposition on October 6, 1947, Judge Leibell qualified his opinion by stating that a judge ruling upon questions put to a witness upon the taking of a deposition takes a broad, liberal view, and if there is any likelihood that the testimony would be admissible at the trial, he overrules the objection to that question, leaving to the trial judge the final determination of the question of admissibility.

United Air Lines,[7] the judge held that testimony taken in a Board inquiry could be used to check the veracity of a witness in answering the interrogatories. In *Tansey v. TWA,* the defendant interjected Sec. 701 (e) as the basis for refusing to produce for the plaintiff's inspection certain documents (including both routine records and a special report prepared by TWA employees as to the cause of the accident) because they had been submitted to the Board for use in an accident investigation. The court rejected this argument and held that the records had to be produced for inspection.

The theory used to support the contention that Sec. 701 (e) prevents the use of all testimony and documents considered by the Board, whether in the hands of the Board or of a private person, is that this section was enacted for the purpose of encouraging full and frank disclosure by witnesses who might otherwise withhold evidence if they knew that it could be used against them in suits for damages. Several court decisions have held that this was the purpose of a similar statute as to railroad accident reports.[8] In the *Gourley* case, the court used this theory as the basis for a refusal to admit testimony previously taken at an Interstate Commerce Commission invetigation.[9] In *Tansey v. TWA,* the judge stated that the reasoning of these cases was not without persuasion but added that "nothing has been found by way of legislative history, or by way of language of either the Act of Congress relating to the reports of the Interstate Commerce Commission or the Act of Congress here under consideration, to compel this view as to the purpose of the statutes."

But even assuming that the railroad reports statute was designed to encourage full and frank disclosure, it is quite possible that Sec. 701 (e)

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[7] Unreported memorandum opinion. (S. D. N. Y., Civil Actions No. 47-501 and No. 48-185, Oct. 21, 1949.) The entire portion dealing with this question is as follows, "The objections to interrogatories based on 49 U.S.C.A. Section 581 cannot be sustained because it does not appear that the content of any report of the Civil Aeronautics Board relating to any accident or the investigation thereof is sought by those interrogatories. It does not even appear that the Board has made any report whatsoever."

[8] Louisville and N. R. R. v. Grant, 234 Ky. 276, 27 S. W. (2d) 980, 984 (1930); Gourley v. Chicago and E. I. Ry., 295 Ill. App. 160, 14 N. E. (2d) 842 (1938).

Sec. 701(e) is apparently based on similar sections in two earlier statutes: 36 Stat. 351 (1910), 45 U.S.C. §41 (1946) (railroad accident reports) and 36 Stat. 916 (1911) as amended, 45 U.S.C. §33 (1946) (railroad boiler accident reports). See also 54 Stat. 927 (1940), 49 U.S.C. §320 (1946) (motor carrier accident reports). The legislative history of the railroad reports statute supports the theory that it was designed to encourage full and frank disclosure. See the statements of Rep. Mann in introducing H.R. 3649 in the House of Representatives. Cong. Rec. 61st Cong., 2d Sess. 155 (1909). See also H.R. Rep. No. 36, 61st Cong., 2d Sess. (1909) and Sen. Rep. No. 240, 61st Cong., 2d Sess. (1910) which state that the I.C.C. was given authority to investigate accidents because the reports of the carriers as to the causes of accidents had been vague and unsatisfactory.

[9] The legislative history of the railroad reports statute is conflicting as to whether it precludes the use in a civil suit of testimony given before the Commission. Rep. Mann thought that it could not be used. Cong. Rec., 61st Cong., 2d Sess. 159 (1909). Rep. Olmsted, another staunch supporter of the bill, stated that such testimony would not be excluded unless it was made a part of the I.C.C. report. P. 156. See also the amendments made by the Senate, Cong. Rec., 61st Cong., 2d Sess. 3459, 5302, 5449, 5514 (1910).

was not enacted for the same purpose. The railroad reports statute requires the railroads to file monthly accident reports with the I.C.C.[10] and provides that such reports, as well as the I.C.C. reports, shall be inadmissible in evidence. Even though the Civil Aeronautics Act authorizes the Board to require the filing of accident reports,[11] it does not specifically provide that such reports shall be inadmissible in actions for damages. If Congress had intended to encourage the disclosure of information by making such reports privileged, it would have been a simple matter to refer to them specifically as it did in the railroad reports statute and the motor carriers reports statute.[12]

There are several reasons why Congress might have wanted to preclude the use of Board reports in actions for damages which would not also require that the privilege be extended to the evidence on which such reports were based. If the findings of the Board as to the probable cause of an accident were admitted in evidence they would probably be conclusive in the minds of most jurors, for the average juror would recognize that the Board is an impartial body which has a great deal of technical knowledge and experience as to aircraft accidents. This would be prejudicial to parties who had not taken part in the Board accident inquiry.[13] It would also be prejudicial to the rights of the litigants since Board accident inquiries follow administrative fact finding procedures which are not designed to provide the safeguards guaranteed by judicial procedures and the formal rules of evidence.[14] Therefore, Congress may have made Board reports inadmissible in evidence so that the Board would not usurp the function of judge and jury to decide civil liabilities.[15]

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[10] 36 Stat. 351 (1910), 45 U.S.C. §38 (1946).

[11] Sec. 702(a)(1), 52 Stat. 1013 (1938), 49 U.S.C. §582 (1946). See Civil Air Regulations, Part 62, 14 Fed. Reg. 4319 (1949).

[12] Congress was quite explicit in providing a privilege in the case of self-incriminating testimony. Sec. 1004(i), 52 Stat. 1022 (1938), 49 U.S.C. §644 (1946). See also Sec. 1104, 52 Stat. 1026 (1938), 49 U.S.C. §674 (1946).

In the *Tansey* case it was argued that Sec. 701(e) did contain explicit language making such evidence privileged because it should be read as "no part of any report of the Board relating to any accident, or no part of the investigation thereof," etc., rather than as "no part of any report of the Board relating to any accident, or *any report of the Board relating to* the investigation thereof." The judge rejected this argument stating, "It is true mention is made in the statute of investigations by the Board, but the language readily may be construed to make privileged only reports of the investigations, not information received in the course of the investigation."

[13] Ritts v. American Overseas Airlines, Inc., *supra* note 6; Tensey v. TWA, *supra* note 4.

[14] Accident inquiries are at all times controlled and conducted by the Board of Inquiry and private attorneys are not allowed to present or cross-examine witnesses (however, the Board of Inquiry will ask any pertinent questions submitted in writing by private persons). The Board does not follow the formal rules of evidence, but frequently admits hearsay and opinion evidence for what they are worth. Such procedures are perfectly fair if the sole purpose of the Board report is to make recommendations for the prevention of similar accidents in the future, but it might be considered unfair to allow a report, based on evidence collected by such procedures, to influence the determination of the civil liabilities of private parties.

[15] During the debates on the railroad reports statute, Rep. Olmsted objected to the use of I.C.C. accident reports in civil suits because "that would substitute the finding of the Interstate Commerce Commission—its declaration of responsibility—for the finding of a court and jury in a damage case." Cong. Rec., 61st Cong., 2d Sess. 156 (1909).

Congress may well have thought that it would be in the interests of aviation safety to have the Board make findings, for the purpose of preventing accidents in the future, based on a lesser amount of evidence than would be necessary to support findings for the purpose of assessing liability for the damages resulting from the accident.[16] Therefore, Congress may have enacted Sec. 701 (e) to give the Board complete freedom to determine the probable cause of an accident without having to consider the huge civil liabilities which might flow from its findings if they were admissible in suits for damages.

If Sec. 701 (e) was enacted so that the Board would not usurp the function of the court and jury, or to guarantee that the Board should be free to determine the probable cause of an accident without considering civil liabilities, the function of the section could be carried out by merely forbidding the use of the Board report in civil suits and it would not be necessary to forbid the use of the evidence on which the Board report was based. However, this raises the puzzling question of why it was deemed necessary to make Board reports inadmissible in evidence when they would seldom, if ever, be admissible anyway under the technical rules of evidence. It can be argued with considerable merit that Sec. 701 (e) is useless if it does not apply to the evidence on which a Board report is based, for the report of the Board itself would be inadmissible anyway.

It is possible that Congress was acting upon the assumption that accident reports would be admissible under the normal rules of evidence.[17] It is also possible that the reports were specifically made inadmissible to make it unmistakably clear that the first part of Sec. 701 (e), which makes accident reports subject to the same provisions for publication as other Board records, was not intended to make accident reports admissible in evidence nor to provide that the findings of fact in such reports should be conclusive if supported by substantial evidence.[18]

Testimony of Board Employees

There seems to be little doubt that the Civil Aeronautics Board can issue regulations forbidding its employees from disclosing aircraft acci-

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[16] It is probably more than mere verbiage that Sec. 702(a)(2) of the Act (52 Stat. 1013 (1938), 49 U.S.C. §582 (1946)) does not direct the Board to find the "cause" of accidents, but merely directs it to find the "probable cause" of accidents. This language seems to instruct the Board to make what amounts to a "highly informed guess" as to the cause of an accident, so as to take all possible precautions to prevent the recurrence of simiiar accidents in the future.

[17] There was a rather confusing discussion of this question during the House debates on the railroad reports statute. Cong. Rec., 61st Cong., 2d Sess. (1909). Rep. Graham (p. 157) and Rep. Martin (p. 159) both stated that an I.C.C. accident report would never be admissible under the technical rules of evidence. Rep. Mann insisted that such reports would be admissible unless rendered inadmissible by statute (pp. 157-158).

[18] See Sec. 205(d), 52 Stat. 984 (1938), 49 U.S.C. §425, and Sec. 1006(e), 52 Stat. 1024 (1938), 49 U.S.C. §646 (1946).

dent information either by producing Board records in court [19] or by testifying in court as to such information.[20] The Board has adopted the rule that employees who are permitted to appear as witnesses in court actions may testify only as to facts actually observed by them in the course of accident investigations and may not give opinion evidence as expert witnesses.[21]

This rule conforms to the provisions of Sec. 701 (e) of the Civil Aeronautics Act. Court decisions interpreting similar provisions as to railroad reports have held that they do not prevent an investigator from testifying as to facts actually observed by him in the course of an accident investigation.[22] There are no judicial decisions on the subject, but a good argument may be made that Sec. 701 (e) precludes opinion testimony by Board investigators. Since the Board members must necessarily rely heavily on its staff's reports in the preparation of accident reports, the reports of Board employees may be considered to be parts of and to collectively form the report of the Board and thus cannot be introduced in evidence because of Sec. 701 (e).[23] Opinion testimony by Board investigators would in effect reveal the contents of their reports, and it has been held that a provision which prohibits the introduction in evidence of certain documents also prohibits testimony in court as to the contents of such documents.[24]

The same reasons which led Congress to prohibit the use of Board reports in actions for damages would lead it to preclude opinion testimony by Board employees. Opinion testimony by a Board employee would be almost as conclusive in the minds of the jury, and therefore almost as likely to usurp the function of the court and jury, as the introduction in evidence of a Board report. Board employees would not be free to determine the probable cause of an accident without considering civil liabilities if they knew that they would later have to testify as to their conclusions in actions for damages. Therefore, it may be argued that the statutory policy set forth in Sec. 701 (e) which precludes the use of a Board report in an action for damages also precludes opinion

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[19] Boske v. Commingore, 177 U.S. 459, 20 Sup. Ct. 701 (1900); Ex parte Sackett, 74 F. (2d) 922 (9th Cir., 1935).

[20] In re Huttman, 70 Fed. 699 (Kans. 1893); In re Lamberton, 124 Fed. 446 (Ark. 1903); In re Weeks, 82 Fed. 729 (Vt. 1897); First National Bank v. Williams, 142 Ore. 648, 20 P. (2d) 222 (1933); Harewood v. McCurty, 22 F. Supp. 572 (Ky. 1938).

[21] The Board has also ruled that its employees may not serve as witnesses for the purpose of testifying to facts observed by them in the course of accident investigations except in those cases in which the Government's investigators are the only source of information available to the party seeking the evidence. This appears to be a reasonable provision since Board investigators are hired for the purpose of investigating accidents and not to testify in private actions. It also appears to be reasonable because the Board makes available to the public all the information in its accident investigation files, except for the opinions of its investigators.

[22] Gerow v. Seaboard Air Line Ry., 188 N. C. 76, 123 S. E. 473 (1924); *cf.* Hines v. Kelley, 252 S. W. 1033 (Tex. Com. App. 1923).

[23] *Cf.* Palmer v. Hoffman, 318 U.S. 109, 115, 63 Sup. Ct. 477 (1942) where the Supreme Court used language which can be interpreted as indicating that a statute prohibiting the use in court of accident reports from a railroad to the I.C.C. also prohibited the use of reports to the railroad from its employees.

[24] In re Huttman, *supra* note 20; In re Lamberton, *supra* note 20.

testimony by Board employees in such actions. However, since there are no judicial decisions it is impossible to make any definite statement as to the applicability of Sec. 701 (e) to the testimony of Board employees. It may never be necessary for a court to decide this question because, as stated before, the Board clearly has the power to regulate testimony by its employees.

Policy Considerations

No analysis of Sec. 701 (e) would be complete without a discussion of the policy considerations, both because it might be considered necessary to enact legislation changing the provisions of the section,[25] and because a court might be influenced by strong policy considerations. The basic consideration is that justice requires all accident information to be available to both the plaintiff and the defendant in a civil suit, unless there is some compelling reason for withholding such information. It is often argued that it is far more important to discover the cause of an accident in order to prevent future accidents than to compensate the victims of past accidents, and that in order to encourage all witnesses to make a full and frank disclosure it is necessary to provide that such information cannot be used in suits for damages. There is considerable merit to this argument, but it must be tempered with other considerations.

In order to guarantee complete disclosure it would probably be necessary to adopt a policy of absolute privilege and complete secrecy as to accident information, for it would often be a comparatively simple matter for a person who had access to the Board's information to subpoena the same records from the defendant or to ask witnesses the same questions in a subsequent suit. Such a degree of secrecy would come close to rendering defendants immune from suit. This would not only be grossly unfair to the victims of aircraft accidents, but would remove one of the strongest incentives to prevent future accidents, *i.e.*, the fear of civil liability as the result of an accident.

Another reason for not overemphasizing the full and frank disclosure argument is that much information will be received even though no privilege is granted. It is unwarranted to assume that all witnesses will withhold or falsify information even though its disclosure might prevent accidents and save lives. In addition to the moral compulsion to give truthful testimony, persons and companies will often reveal dangerous conditions because of their economic stake in preventing accidents which destroy public confidence in aviation. Moreover, representatives of industry and employee groups often participate in Board investigations and are quite anxious to reveal information which will fix the responsibility on some other person or group. And finally, the Board has wide powers to subpoena witnesses and documents if infor-

[25] See, for example, Sec. 705 of H.R. 5561, 81st Cong., 1st Sess., a bill to recreate an independent Air Safety Board. This bill would extend a privilege to all records and testimony used in an accident investigation.

mation is being withheld.[26] These considerations indicate that the situations in which vital information could and would be withheld are not likely to be as numerous as some people have contended. However, there will still be some situations where a person would disclose more information if he knew that it could not be used against him.

The basic problem is to develop a policy which will achieve a proper balance between securing information and compensating the victims of accidents. The formula for reaching this solution should be based upon two concepts: (1) Aircraft accidents are investigated solely for the purpose of preventing similar accidents in the future and not to help private persons recover damages. (2) Nevertheless, a plaintiff faces almost insuperable obstacles in getting evidence as to an airplane crash, and accident investigation information should not be handled so as to add to these difficulties.

The following recommendations are made on the basis of the above considerations:

(1) The Board should make available to the public all factual information gathered by it in an investigation because its procedures often deprive certain persons of sources of information. The Board often prevents witnesses from gaining information by roping off the scene of an accident and by shipping certain aircraft parts to a laboratory for tests. Furthermore, representatives of industry and employee groups are often permitted to participate in the investigation and thus have access to much information, while the representatives of the victims seldom participate in the investigation. These procedures are absolutely necessary in order to determine the probable cause of an accident, but they would be unfair if the Board did not make available to the public the information gathered in the investigation.

(2) All records and reports submitted to the Board by private persons should be available for use in actions for damages. If a privilege were extended to such documents, it would be virtually impossible for a plaintiff to get access to any documentary evidence concerning an accident. Such documents should be available even from the Board's files, for a rule to the contrary would enable persons to suppress evidence by submitting every document to the Board, where it could not be reached by an opposing party.

(3) Witnesses should be encouraged to disclose information in Board inquiries by providing that their testimony cannot be used in actions for damages.[27] This rule would not impose any additional burden on plaintiffs in civil actions because the testimony obviously would not have been available if it had not been for the Board inquiry. If a witness is completely honest he will tell the truth at both the Board inquiry and the action for damages. If he is not completely honest, there is nothing to be gained by encouraging him to withhold evidence or commit perjury in the Board inquiry as well as in the civil action. However, it

[26] Secs. 702(c), 902(g) and 1004 of the Act; 52 Stat. 1014, 1016, 1021 (1938); 49 U.S.C. §§582, 622, 644 (1946).

[27] This rule should apply only to the use of such testimony in actions for damages. The testimony should be admissible in actions to revoke or suspend a safety certificate because of the great public interest in preventing incompetent or reckless persons from endangering lives and property.

should be noted that even extending a privilege to such testimony may not guarantee a full and frank disclosure, for a witness will probably realize that he may be asked the same questions in an action for damages and that he will be subject to a perjury charge if he does not answer them truthfully.

These recommendations would probably require legislative action, since there appears to be no way that Sec. 701 (e) could be interpreted to extend a privilege to testimony but not to documents.

Conclusions

The few judicial decisions existing to date indicate that Sec. 701 (e) does not exclude from actions for damages the documents and testimony on which the Board's reports are based. This conclusion is amply supported by the language and the probable purposes of Sec. 701 (e).

It might be advisable to amend the section so as to prevent the use of testimony from a Board inquiry in suits for damages. However, the Board should continue to make available to the public all factual information gathered in an accident investigation. All documents used in Board inquiries should be admissible in actions for damages, whether such documents are in the files of the Board or in the hands of private persons.

The Board has the power to issue regulations governing the testimony of its employees in civil actions. The Board has determined that its employees may testify as to facts actually observed by them when such facts cannot be readily obtained elsewhere, but may not give opinion testimony as expert witnesses. A reasonable argument may be made that Sec. 701 (e) precludes opinion testimony by Board employees, but there is no court opinion on the question.

NATIONAL STATUS OF AIRCRAFT*

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INTERNATIONAL air law is concerned with two major problems: First, the legal status of those areas of space above the earth's surface usable as a medium for the flight of self-propelled and man-controlled or man-operated instrumentalities, including aircraft; and, second, the legal status of such flight instrumentalities themselves.

The first problem (the legal status of usable space) involves a determination of the relation of the several States to such usable space — here called flight-space — particularly the right of each State to use or control flight-space over its land and water territories and over the high seas or other areas not subject to the territorial sovereignty of any State. The second problem (the legal status of flight instrumentalities) involves the determination (a) in public law, of the relationship between the State and such flight instrumentalities, and (b) in private law, the relationship between such flight instrumentalities themselves and those persons who furnish supplies or services for their operation or maintenance or suffer damage or other wrong by reason of such operation.

This study assumes that the problem of the legal status of flight-space has been settled insofar as those areas are concerned ordinarily called "airspace" in which "aircraft" normally operate. In the language of Article 1 of the Chicago Convention of 1944, each State has "complete and exclusive sovereignty over the airspace above its territory," such territory including both land areas and territorial waters adjacent thereto. This study also assumes that no State has sovereignty in any part of space over the high seas or over other areas on the surface of the earth not part of the territory of any State.

This study does not deal with nor make any assumptions as to the legal status of those areas of space above the "airspace," even though

*[NOTE—This article has been condensed by the author from a much longer and more detailed study of the same subject matter prepared for the Air Law Committee of the International Law Association (London).]

such areas are today usable for such flight instrumentalities as guided missiles. Nor does this study deal with the legal status of any type of flight instrumentality except "aircraft" capable of being used for the carriage of men or cargo.

Aircraft are instrumentalities of transport. Transport, in its broadest sense, is the movement of men or cargo from a determined point of departure to or toward a desired destination. It involves: first, motion; second, a medium on or through which such motion takes place; and, third, instrumentalities or means used through such medium to effectuate the transport. The four principal self-propelled instrumentalities of transport, in the order of their historic development, are (1) vessels, (2) railway trains, (3) automotive vehicles such as buses, trucks and automobiles, and (4) aircraft. The first three use areas on the earth's surface as mediums of transport. With the discovery of the art of human flight, space above the earth took its place as an entirely new transport medium. New legal problems immediately arose. To understand the resulting difficulties in the determination of the legal status of aircraft, an historic analysis of the development of the legal status of the older forms of transport instrumentalities is useful and perhaps necessary.

1. Vessels

Centuries of international custom have invested vessels with a status of legal quasi-personality. In public law a vessel may be said to have the quality of *nationality,* indicating a relationship to a given State somewhat similar to the relationship of an individual to the State to which he owes allegiance. In private law, a vessel may be said to have the quality of *responsibility,* indicating that the vessel itself, irrespective of the responsibility of the owner or operator, is accountable as an individual would be for services and supplies furnished it, as well as for damages and injuries resulting from its use in maritime transport. These two attributes of a vessel are quite distinct, although they have at times been unnecessarily confused.

A. Nationality — Nationality has been stated to be "the status of a natural person who is attached to a state by the tie of allegiance."[1] A vessel is an inanimate object, a movable thing, but it is "a thing of a very particular kind and which from several points of view may be compared to a person."[2] Like persons, vessels are said to possess a nationality. "Such a statement," says Hyde, "implies the existence of a relationship between a vessel and a State of such distinctive closeness and intimacy that the latter may fairly regard the vessel as belonging to itself rather than to any other country."[3]

[1] Harvard Research in International Law—Nationality, in: *American Journal of International Law,* Vol. 23, 1929, Supplement, pp. 13, 22.

[2] Gilbert Charles Gidel, *Le Droit international public de la mer,* Chateauroux, Les établissements Mellottée, 1932-34, Vol. 1 (1932), p. 72.

[3] Charles Cheney Hyde, *International Law . . .,* 2d rev. ed., Boston, Little Brown, 1945, Vol. 1, Sec. 243A, p. 809.

The possession by a vessel of nationality is "the basis for the intervention and protection by a State" and "it is also a protection for other States for the redress of wrongs committed by those on board against their nationals."[4] On the concept that vessels belong each to a determined State, they are submitted to its control, are exposed to its sanctions in case of disobedience, and have at the same time a guarantor (from the international point of view) of the manner in which they will use the seas, and a protector against the abuse which they might be compelled to suffer on the part of vessels of other States. This quality of guarantor and protector given to the State whose flag the vessel carries has in modern times led to the valid conclusion that the nationality of a vessel "is the primary condition for the peaceful utilization of the high seas."[5]

The nationality of a vessel is that of the flag rightfully carried by her. The State concerned accepts the authority and responsibility resulting from the vessel's nationality.[6]

Public vessels are not ordinarily registered. Merchant vessels, according to the laws of most States, must however be registered. Each State determines for itself the political conditions as to ownership, where the vessel was built, or otherwise, which will authorize registration. With the basis to be applied by any State as a condition of nationality and subsequent registration, international law in the absence of special agreement or convention is not concerned.

The fact that vessels have the nationality of the State of the flag has led to complicated problems affecting the jurisdiction of such State and other States over such vessels, over those on board, and over crimes or other occurrences there. These problems are concerned, among other things, with the legal distinction between public and private vessels, also with the difference existing between the competence of the flag State and other States dependent on whether the vessel is in its home waters, on the high seas, or in foreign waters. Any adequate statement of these questions is quite beyond the scope of this study, except to the extent that any necessary analogies to be drawn between the situation of vessels and of aircraft will be covered hereafter when discussing the nationality of aircraft.[7]

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[4] Alexander Pearce Higgins and C. John Colombos, *The International Law of the Sea*, London/New York/Toronto, Longmans Green, 1943, p. 189.

[5] Gidel, *op. cit.* Vol. 1, pp. 73-74.

[6] John Westlake, *International Law—Part I, Peace*, Cambridge, Cambridge Univ. Press, 1910, p. 169.

[7] For some of the basic problems, see: Harvard Research in International Law—Jurisdiction with Respect to Crime, in: *American Journal of International Law*, Vol. 29, 1935, Supplement, pp. 508-519; Higgins and Colombos, *op. cit.* Chaps. 7 & 8, pp. 164-222; Lassa F. L. Oppenheim, *International Law: A Treatise*, 7th ed., London/New York/Toronto, Longmans Green, 1948, Vol. 1, Secs. 260-264, pp. 545-549, Secs. 450-451, pp. 764-767; *The S.S. Lotus* (France v. Turkey), Permanent Court of International Justice, Judgment 9, Sept. 7, 1927, Ser. A, No. 10—also in: Manley O. Hudson, *World Court Reports*, Washington, Carnegie Endowment for International Peace, 1934-43, Vol. 2, pp. 20-92; Philip C. Jessup, *The Law of Territorial Waters and Maritime Jurisdiction*, New York, Jennings, 1927, p. 191.

B. Responsibility — A natural person is responsible for goods sold to him and services performed for his benefit with his authority. He is also responsible to compensate for damages negligently or wrongfully caused an injured person.

In customary maritime law a vessel has been considered to have such legal quasi-personality as to make it similarly responsible under circumstances well known to the maritime law. The responsibility of the vessel is enforceable in the admiralty courts by proceedings in rem against the vessel itself. Salient features of the "maritime lien" thus enforced are that such lien is not dependent upon the possession by the lienor of the vessel; that the lien is not cut off by a sale even to a bonafide purchaser except by proceedings in an admiralty court; and that the vessel may be responsible in rem even if the owner is not responsible in personam.

Maritime liens are generally now recognized for certain services to the ship including seamen's wages, towage, wharfage, necessary repairs and supplies, claims arising from a bottomry bond, salvage, general average, and perhaps some others.

Even more striking is the responsibility of the vessel for the tort damages which it causes. As was said by Justice Story in a leading case: "It is not an uncommon course in the admiralty, acting under the law of nations, to treat the vessel in which or by which, or by the master or crew thereof, a wrong or offence has been done as the offender, without any regard whatsoever to the personal misconduct or the responsibility of the owner thereof. . . . The ship is . . . by the general maritime law held responsible for the torts and misconduct of the master and crew thereof, whether arising from negligence or a wilful disregard of duty; as for example, in cases of collision and other wrongs done upon the high seas or elsewhere within the admiralty and maritime jurisdiction, upon the general policy of that law, which looks to the instrument itself, used as the means of the mischief, as the best and surest pledge for the compensation and indemnity to the injured party."[8]

As stated in a later leading case: "According to the admiralty law, the collision impresses upon the wrongdoing vessel a maritime lien. This the vessel carries with it into whosoever hands it may come.[9]

The responsibility of the vessel for both contractual or tort claims is subject to a well-known exception. Ordinarily public vessels are considered immune. As Justice Holmes said: "The personality of a public vessel is merged in that of the sovereign."[10] Unless the sovereign consents to be sued, war vessels and other public vessels in the service

[8] *The United States v. The Cargo of the Brig Malek Adhel,* (1844), 2 Howard (43 U.S.) 210, pp. 233-234.
[9] *The China* (1868), 7 Wallace (74 U.S.) 53, p. 68. See also: *The Bold Buccleugh,* 7 Moore, P.C.C. 267.
[10] *The Western Maid* (1922), 257 U.S. 419, p. 433.

of a State appear to be immune from the direct responsibility which other vessels in like circumstances would incur.

From the foregoing it is apparent that vessels have both nationality in public international law and responsibility in private law within the admiralty jurisdiction. As instrumentalities of international transport they are under the protection of the State whose flag they carry and that State is the guarantor to other States of their international conduct. For the supplies, services, and wrong-doings recognized as the bases of maritime liens they are responsible as if they were legal persons.

2. Railway Trains and Automotive Vehicles

A. Nationality — No suggestion has ever been made that railway trains should have "national character" in international law. However, as to automotive vehicles some confusion has existed. Certain international conventions have been adopted to cover international circulation of motor vehicles.[11] A careful analysis of these conventions demonstrates, however, that they provide nothing more than a means of identifying the vehicle as having been registered and licensed in a particular State, without investing the vehicle with the true international law characteristic of nationality. These conventions do not impute to the State that degree of responsibility for the conduct abroad of the registered vehicle which is characteristic of the nationality of vessels. Under such conventions, a contracting State will certainly not consider itself responsible to protect the vehicle as a legal entity while in foreign territory, apart from its owner or operator, as the same State would protect its national vessels on the high seas or in foreign ports.

B. Responsibility — Neither railway trains nor automotive vehicles have individual international responsibility for services and supplies furnished or for damages caused. If by local law a lien exists for supplies or services, it is ordinarily lost by surrender of the possession of the thing to which the lien attaches. Separate responsibility does not exist beyond the responsibility of the owner. Even though the railway train or the automotive vehicle may under some systems of law be classed as dangerous instrumentalities, making the owner responsible for damages caused by them irrespective of negligence, nevertheless the responsibility is that of the owner or operator and not that of the

[11] See: (1) Convention with Respect to the International Circulation of Motor Vehicles, Paris, October 11, 1909, in: U.S. Dept. of State, *Treaty Information Bulletin*, No. 13, October 31, 1930, pp. 25-36; *Br. and For. St. Papers*, Vol. 102, p. 64;

(2) International Convention Relative to Motor Traffic, Paris, April 24, 1926, in: *Treaty Information Bulletin, op. cit.* pp. 36-55; Manley O. Hudson, *International Legislation*, Washington, Carnegie Endowment for International Peace, 1931, Vol. 3, pp. 1859-1872;

(3) Convention on the Regulation of Automotive Traffic, Washington, October 6, 1930, in: *Treaty Information Bulletin, op. cit.* pp. 20-24; Hudson, *International Legislation, op. cit.* Vol. 5, pp. 786-792;

(4) Convention on Inter-American Automotive Traffic, Washington, December 15, 1943 (Treaties and Other International Acts Series 1567).

vehicle itself, as distinguished from the rule of responsibility applicable to vessels.

3. Aircraft

Aircraft, like vessels, and unlike railway trains and automotive vehicles, now have that quality of legal quasi-personality in public international law discussed above as *nationality*. But unlike vessels, and like railway trains and automotive vehicles, aircraft are not yet considered as having the quality of *responsibility* in private law. The legal status of aircraft thus places them in a class apart from other instrumentalities of transport and requires separate consideration. Analogies to the status of either vessels or railway trains and automotive vehicles may lead to inaccurate results.

A. Nationality — The term "aircraft" as here used includes both balloons and airplanes. The first balloon flight took place in 1783, but it was not until about the beginning of the twentieth century that international law assigned the quality of nationality to flight instrumentalities. Even in the agreement entered into in 1898 between Germany and Austria-Hungary (the first known international air navigation agreement) the States concerned did nothing more than grant reciprocal authority for military aviation officers to cross the frontiers in military balloons while in training — the balloons involved appeared to have been considered merely as incidental vehicles.[12] Nor can The Hague declaration of 1899, prohibiting for a term of five years the launching of projectiles or explosives from balloons,[13] be considered as assuming national status in the balloons themselves irrespective of the personnel on board.

The first statement that aircraft should have nationality like that of vessels was made by Fauchille in 1901.[14] He clarified it in 1902 in his proposals to the Institute of International Law[15] and repeated it in his 1910 report.[16] Between 1902 and 1910 other writers on international law and participants in learned conferences discussed the necessity that aircraft have nationality somewhat like that of vessels when used in international commerce.[17]

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[12] Text of this agreement is given in Erwin Riesch, "Das erste Luftfahrtabkommen der Welt," *Archiv für Luftrecht*, Vol. 10, 1940, p. 41.

[13] James Brown Scott, ed., *The Hague Conventions and Declarations of 1899 and 1907*, New York, Oxford Univ. Press, London/Toronto *et al.*, H. Milford, 1915 (Carnegie Endowment for International Peace, Division of International Law, Washington, D. C.).

[14] Paul Fauchille, *Le Domaine aérien et le régime juridique des aérostats*, Paris, A. Pedone, 1901. Also in: *Revue générale de droit international public*, Vol. 8, 1901, pp. 414-485. Text at p. 471.

[15] *Annuaire de l'Institut de droit international*, Vol. 19, 1902, pp. 19-86.

[16] *Ibid.* Vol. 23, 1910, p. 305.

[17] Karl Hilty, "Die völkerrechtlichen Gebräuche in der atmosphärischen Zone," *Archiv für öffentliches Recht*, Vol. 19, 1905, pp. 87-94; Friedrich von Grote, *Beiträge zum Recht der Luftschiffahrt*, Borna-Leipzig, R. Noske, 1907, pp. 22-23; Alex Meyer, *Die Erschliessung des Luftraumes in ihren rechtlichen Folgen*, Frankfurt a. M., Gebrüder Knauer, 1908, pp. 26-33; Friedrich Meili, *Das Luftschiff im internen Recht und Völkerrecht*, Zurich, O. Füssli, 1908, pp. 10-52; Edgar Daus, *Die Luftschiffahrt in staats—und völkerrechtlicher Hinsicht*,

By 1909 governments had informally recognized that balloons and other aircraft had something resembling national status. In that year Clemenceau, as Minister of the Interior of France, issued a circular directing that "foreign balloons" landing in France be held for duty.[18] In the same year the French Government issued invitations to the first formal diplomatic conference of European States ever held to discuss questions of air navigation, asking the invited States, among other things, whether they felt that public and private aircraft should be distinguished and whether aircraft should have nationality.[19]

The diplomatic conference called in 1909 met at Paris in 1910. Its importance in the development of international air law has been consistently underestimated. Emphasis has been given to the failure of the conference to agree on the final terms of an international convention. Too little has been said of what the conference accomplished. In the matter of determining whether aircraft should be classified as public and private and whether all aircraft should have nationality, the discussions and decisions at the 1910 conference were determinative of many subsequent developments.

The scope of this study will not permit a detailed examination of the discussions at Paris in 1910. The result of these discussions appear in the proposed international convention (complete except for Articles 19 and 20 regarding the freedom or control of the circulation of aircraft) as agreed upon when the conference adjourned.[20] Chapter I, which may be briefly examined, was entitled "Nationality and Regis-

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Erlangen, E. J. Jacob, 1908, p. 16; Friedrich Gründwald, *Das Lufftschiff in völkerrechtlicher und strafrechtlicher Beziehung*, Hannover, Helwing, 1908, pp. 37-45. (See also his: "Standesamliche Beurkundung von Todesfällen und Geburten auf Luftschiffen," *Archiv für öffentliches Recht*, Vol. 24, 1909, pp. 478-483); Arthur K. Kuhn, "Aerial Navigation in its Relation to International Law," *Proceedings of American Science Association*, 5th annual meeting, 1908, p. 85; Ernst Zitelmann, "Luftschiffahrtrecht," *Zeitschrift für internationales privat- und öffentliches Recht*, Vol. 19, 1909, pp. 458-496; Christian Meurer, *Luftschiffahrtrecht*, Munich/Berlin, J. Schweitzer, 1909, pp. 21-27; Chapter 2 (b) of "Le Code de l'air" of the Comité juridique international de l'aviation in: *Revue juridique internationale de la locomotion aérienne*, Vol. 1, 1910, p. 45; and recommendations by German and French subcommittees at pp. 171 and 174 respectively; Proposal by von Bar before the Institute of International Law, in: *Annuaire de l'Institut de droit international*, Vol. 23, 1910, p. 317; Antonio Brunetti, "Lineamenti d'una legislazione sulla proprietà dei veicoli aerei," at the Congresso giuridico internazionale per il regolamento dalla locomozione aerea, Verona, 31 maggio—1-2 giugno, 1910, in: *Atti e relazioni*, Verona, Società tipografica cooperativa, 1910, pp. 48-55; "Views" adopted by the Verona conference, in: *Atti e relazioni, op. cit.* p. 142 and *Revue juridique internationale de la locomotion aérienne*, Vol. 1, 1910, pp. 181, 185.

[18] *Revue juridique internationale de la locomotion aérienne*, Vol. 1, 1910, p. 24.

[19] Conférence internationale de navigation aérienne, Paris, 1910, *Exposé des vues des puissances d'après les memorandums addressés au gouvernment français*, Paris, Imprimerie nationale, 1909, p. 9.

[20] Conférence internationale de navigation aérienne, Paris, 1910, *Procès-verbaux des séances et annexes*, Paris, Imprimerie nationale, 1910, pp. 188-205. For French text of the proposed convention, see also: Albert Roper, *La Convention internationale du 13 octobre* 1919 . . ., Paris, Sirey, 1930, pp. 212-225. For an English translation, see: *Reports of the Civil Aerial Transport Committee* . . ., Presented to Parliament by Command of His Majesty, London, H.M. Stationery office, 1918, (Cd. 9218), pp. 25-35.

tration of Aircraft." Article 2 of this chapter provided that only those aircraft which possessed the "nationality" of a contracting State were governed by the convention, and that none of the contracting States should permit a free balloon or airship to fly over its territory unless it complied with the above conditions, although special authorization might be granted. Article 3 stated that nationality of aircraft should be based, by the legislation of each contracting State, on the nationality or domicile of the owner in the State's territory. Article 4 required that when the aircraft possessed the nationality of one contracting State, no other State could confer nationality upon it. Other articles provided that aircraft be entered on the register of the State conferring nationality, such entry containing a description and identification mark of the aircraft; also that each aircraft should bear its nationality mark and registration number and should carry a certificate of navigability issued by the national State.

Public Aircraft Defined

In a later chapter public aircraft were defined (Article 40) as "the aircraft employed in the service of a contracting State, and placed under the orders of a duly commissioned official of that State." The provisions applicable to determination of nationality and registration were not to apply to such public aircraft. The distinctive national mark to be borne by military aircraft (Article 42) would be "the Sovereign emblem of their State"; the departure or landing of military aircraft of a contracting State in the territory of another State would be allowed (Article 44) only with the latter's authorization, and each contracting State might forbid or regulate the passage of military aircraft of other contracting States over its territory. But military aircraft (Article 46), when legitimately within or above the territory of a foreign State, should "enjoy the privilege of extraterritoriality," as also the members of the crew wearing uniform while forming a distinct unit or carrying out their duties.

The principle of nationality of aircraft as thus accepted by the 1910 conference was carefully explained in the proceedings. In the report filed on behalf of the First Commission of the conference by Fauchille (serving as reporter and one of the French delegates), it was pointed out that the delegations of Switzerland and of the Netherlands had considered that aircraft should be treated in a manner similar to automobiles and needed only identification,[21] but that the other States had adopted the view that an aircraft was more like a vessel than an automobile — that it constituted a kind of legal entity — that it should have its own nationality. The majority of the States present felt that aircraft should be thus under the control of a particular State, responsible for it to other States, and that the aircraft itself should be entitled to the protection of such State. It was recognized that this responsi-

[21] *Ibid.* p. 73.

bility and right of protection constituted, between that State and the aircraft, a relationship analogous to that existing between a vessel and the State whose flag it carries, called (as stated in the report) "the nationality of the vessel." It was made clear, however, that the State of the flag of the aircraft would not thereby be responsible in private law for damages caused by force majeure or resulting from fault or negligence of the aviators, nor would the national character of aircraft prejudge the solution of questions of conflict of laws and jurisdiction which air navigation might raise in civil and penal matters.[22]

Nothing that has occurred since 1910 detracts from the soundness of the explanation of nationality of aircraft as then accepted. In public international law the nationality of vessels and the nationality of aircraft indicate the responsibility of the flag State to other States for the conduct of the vessel or aircraft in question and the right of such vessel or aircraft to international protection by such State.

Following the 1910 conference the application of the concept of such nationality to aircraft was rapidly accepted both in doctrine and in practice. At the meeting of the Institute in April 1911 at Madrid it was decided that aircraft should be classified as public and private; that each aircraft should have nationality, and that this should be that of the country where the aircraft was registered.[23]

British and French Practice

In 1911 the first British Aerial Navigation Act (1 & 2 Geo. 5) was adopted, granting to a Secretary of State wide powers to prohibit by order the navigation of aircraft over such areas as might be prescribed in the order. The power to differentiate between national and foreign aircraft was implicit in the Act.

A French decree later in 1911 provided that no aircraft could be put in service in France without a navigation permit, unless it satisfied the conditions foreseen by international conventions. As no international convention had been entered into, this meant that no aircraft could be flown in France unless a French permit were issued. The details included in this decree were clear adaptations into national practice of the priniciples accepted at the 1910 Paris conference differentiating between public and private aircraft, and providing for registration of the latter and separate flight regulations and nationality provisions applicable to the two classes. It also recognized the difference between national and foreign aircraft.

The concept of nationality was further clarified in practice by the British "Aerial Navigation Act, 1913," amending the Act of 1911, and specifically providing for the issuance of orders prescribing "the areas

[22] *Ibid.* p. 74.

[23] *Annuaire de l'Institut de droit international,* Vol. 24, 1911, p. 346. Similar conclusions were reached at the first congress organized by the Comité juridique international de l'aviation held in Paris, May 31, 1911. See: *Revue juridique internationale de la locomotion aérienne,* Vol. 2, 1911, pp. 201-202.

within which aircraft coming from any place outside the United Kingdom are to land and the other conditions to be complied with by such aircraft. . . ." The orders thereafter issued under this Act recognized the principle of nationality both for public and private aircraft.

In the same year an international arrangement was made between France and Germany by an Exchange of Notes dated July 16, 1913, under which French aircraft might fly into and over Germany and German aircraft might fly into and over France subject to very strict conditions.[23a] On December 13, 1913 a new presidential decree was issued in France replacing the 1911 decree regulating air navigation.[24] The new decree continued in effect and amplified most of the old provisions. In the order implementing this decree, attention was directed to the fact that no aircraft could fly in France without a permit except in accordance with international conventions, and calling attention to the arrangement between Germany and France concluded earlier in the year.[25] Again the principle of nationality was full accepted and recognized.

With the outbreak of World War I the actions of both neutral and belligerent powers recognized that aircraft had acquired national character and should be dealt with as legal entities.[26] But the privilege of asylum and temporary sojourn for repairs, usually accorded to war vessels in international law, was not accorded to belligerent aircraft.[27] In Fauchille's proposed international convention, submitted to the Institute in 1911, provisions had been inserted permitting belligerent military aircraft to leave any neutral territory within twenty-four hours after entry, and that in general the Hague Convention of October 18,

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[23a] For text of this agreement, see: Roper, *op. cit.* pp. 246-251; *Revue juridique international de la locomotion aérienne*, Vol. 4, 1913, pp. 240-242. See also: John C. Cooper, *The Right to Fly*, New York, Henry Holt, 1947, pp. 20-22.

[24] *Revue juridique internationale de la locomotion aérienne*, Vol. 5, 1914, pp. 9-20.

[25] *Ibid.* pp. 20-23.

[26] For neutral treatment of belligerent aircraft, see: Netherlands decree of August 3, 1914, which prohibited airships not belonging to the Netherlands' forces from crossing its land frontiers [Francis Deák and Philip C. Jessup, eds., *A Collection of Neutrality Laws, Regulations and Treaties of Various Countries*, Washington, Carnegie Endowment for International Peace, 1939, Vol. 2, p. 807]; Swedish law of September 7, 1914, which authorized the king by order to prohibit air traffic over Swedish territory except to aircraft of the Swedish State or engaged in its service [*British & Foreign State Papers*, Vol. 110, p. 560; Deák and Jessup, *op. cit.* p. 964]; and proclamation of same date by King of Sweden prohibiting such air traffic [Deák and Jessup, *op. cit.*, p. 975] and amendment to this prohibitory order to apply it to "airplanes other than those belonging to Sweden" [Deák and Jessup, *op. cit.* p. 975]; ordinance of the Federal Council of Switzerland dated August 4, 1914 which provided that balloons and aircraft not belonging to the Swiss army could not rise and navigate in airspace over Swiss territory except with special permission, and that passage of all balloons and aircraft coming from abroad was forbidden [Deák and Jessup, *op. cit.* p. 1008]; proclamation by the United States of America on November 13, 1914, relating to the neutrality of the Panama Canal Zone, which forbade by Rule 15 "aircraft of a belligerent power, public or private" from descending or rising within the jurisdiction of the United States at the Canal Zone or to pass through the airspace above the lands and waters within such jurisdiction [Deák and Jessup, *op. cit.* p. 1205].

[27] James Molony Spaight, *Aircraft in Peace and the Law*, London, Macmillan, 1919, p. 9.

1907, applicable to rights of neutrals in naval warfare, should be applied to air warfare.[28] In practice the principle of twenty-four hour asylum was not accepted. When, on August 29, 1914, the German Government protested to the Dutch Government against the seizure of a German naval airplane in a Dutch port, the Dutch Government replied that aircraft could not be treated as warships due to their liberty of action and the facility with which they could carry out reconnaissance and escape from all control, and that aircraft must therefore require special treatment.[29] The nationality of aircraft was thus recognized, but certain privileges in time of war accorded to war vessels were denied. It may be said here that this rule of international air law, pursuant to which belligerent aircraft are treated as being sui generis and, upon entering neutral territory, must be interned by the neutral State together with the crew, has by custom of World War I and World War II become a recognized and generally accepted principile.[30]

Nationality in Western Hemisphere

While World War I was being fought in Europe, the concept of nationality of aircraft began to receive general recognition in the western hemisphere. For example, at the unofficial Pan American Aeronautic Conference held at Santiago, Chile, in March 1916 recommendations were adopted which included rules that all aircraft should have nationality – public aircraft to be that of the State to which they belonged, and private to be that of the owner – and that all aircraft should carry a distinctive national emblem.[31] Also, in the project for the regulation of maritime neutrality adopted by the American Institute of International Law in 1917, the nationality of aircraft was tacitly recognized by the provisions of Article 20, stating that airplanes, dirigibles, or aircraft of belligerent countries were not permitted to fly over the territory or the jurisdictional sea of neutral powers.[32]

Work of Aeronautical Commission at Peace Conference After World War I

When at the end of World War I the Aeronautical Commission of the Peace Conference was established in March of 1919 and directed to prepare a convention on international air navigation in time of peace, two draft conventions had already been prepared – one by Great Britain and the other by France. The Commission also had

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[28] *Annuaire de l'Institut de droit international*, Vol. 24, 1911, p. 117.

[29] Spaight, *op. cit.* p. 203.

[30] James Molony Spaight, *Air Power and War Rights*, 3d ed., London/New York/Toronto, Longmans Green, 1947, pp. 420-428.

[31] Henry Woodhouse, *Textbook of Aerial Laws . . .*, New York, Stokes, 1920, p. 12; Brower V. York, "International Air Law in the American Republics," *Journal of Air Law and Commerce*, Vol. 3, 1932, p. 415.

[32] Institut Américain de droit international, *Acte final de la session de la Havane*, 22-27 *janvier* 1917, *Résolutions et projects*, New York *et al.*, Oxford Univ. Press, 1917, p. 92.

available the work of the 1910 Paris Conference. At one of its first sessions the Commission adopted certain principles to govern its work, including the following: "4. The recognition that every aircraft must possess the nationality of one contracting State only, and that every aircraft must be entered upon the register of a contracting State, the nationality of which it possesses."[33]

When the Legal Subcommission reported to the Aeronautical Commission, it discussed the question of nationality.[34] Having first decided that the proposed convention should be based on the principle that each State has sovereignty in the airspace over its territory and having then discussed the question of innocent passage for aircraft of contracting States in the airspace over other contracting States, the Subcommission said, in substance, that access into airspace being open to aircraft of contracting States, the first question logically presenting itself was that of "nationality." Reasons were then stated as to why the Subcommission recommended that aircraft could be registered only in the State of which its owner was a national. The general effect of nationality does not seem to have been fully discussed, at least so far as available records of the actual proceedings indicate. But the text reported to the Commission, and adopted by the Commission, and ultimately incorporated into the final convention of 1919, leaves no doubt that nationality was considered as having the characteristics in international law contemplated in the 1910 conference. The analogy to the nationality of seagoing vessels and the similarity of the language of the 1919 convention and the 1910 draft convention leaves little doubt of the correctness of this assumption.

The Paris convention as finally signed in 1919 provided, among other things: (Art. 5) that no contracting State should, except by special authorization, admit flight over its territory by aircraft not possessing "nationality of a contracting State"; (Art. 6) that aircraft possess the nationality of the State where registered; (Art. 7) that no aircraft should be registered unless it belongs wholly to nationals of such State, with special provisions as to aircraft owned by an incorporated company; (Art. 8) that aircraft cannot be validly registered in more than one State; (Art. 15) that every aircraft of a contracting State has the right to cross the airspace of another State without landing, (thus indicating that aircraft were considered as legal entities representing their national State); (Art. 25) that each contracting State undertook to ensure that every aircraft flying above its territory and that every aircraft wherever it might be carrying its nationality mark should comply with the regulations under the convention, (thus indicating that each contracting State assumed the responsibility for the conduct abroad of aircraft having its nationality).

[33] Conférence de la paix, 1919-1920, *Recueil des actes de la conférence*, Partie VII, Préparation et signature des traités et conventions divers, A—Conventions générales entre alliés, (1) Commission de l'aéronautique, Paris, Imprimerie nationale, 1933, pp. 14, 143; *La Paix de Versailles: aéronautique*, Paris, Les Editions internationales, 1934, pp. 20, 129.

[34] Conférence de la paix, *op. cit.*, p. 429; *La Paix de Versailles, op. cit.* p. 499.

When the Paris Convention was discussed at the meeting of the International Law Association at Portsmouth in 1920, Hazeltine, certainly one of the greatest experts on international air law then living, pointed out the analogy in the convention between the nationality and registration of aircraft and existing international law as to the nationality and registration of seagoing vessels.[35] This principle that each aircraft shall have nationality and be registered was also incorporated into the Ibero-American Convention Relating to Air Navigation[36] signed at Madrid in 1926 and in the Pan American Convention on Commercial Aviation[37] signed at Havana in 1928. However, Article 8 of the Pan American Convention abandoned the requirement that contracting States must be governed by the nationality of the owner of the aircraft when authorizing registration and adopted the generally understood international rule as to vessels by which each State determines for itself the basis on which it will allow its flag to be carried. Accordingly the Pan American Convention provided that "the registration of aircraft . . . shall be made in accordance with the laws and the special provisions of each contracting State." This principle was also accepted by an amendment to Article 7 of the Paris Convention in 1929, bringing even closer the analogy with international maritime law. The principle became thus generally accepted that each State is the sole judge of the basis on which aircraft may be registered and thereby assume the nationality of the State in question.

Proposed Aerial Warfare Rules

Several important doctrinal discussions between World War I and World War II further clarified the principle of nationality. The "Proposed Rules for the Regulation of Aerial Warfare" drafted by the Commission of Jurists at The Hague in 1923, although never adopted as an actual international convention, have always had great weight as a sound statement of the rules of international air law applicable in time of war.[38] These rules provided for a distinction between public and private aircraft, and also between military aircraft and others employed in public service. They further provided that aircraft should carry external marks to show nationality and that "no aircraft may possess more than one nationality." The rules themselves have a striking resemblance to certain of the accepted practices of naval warfare, except that Rule 40 stated that "belligerent military aircraft are forbidden to enter the jurisdiction of a neutral State," and Rule 42 stated that "a neutral government shall use the means at its disposal to intern any belligerent military aircraft which is within its jurisdiction after having alighted for any reason whatsoever, together with its crew and

[35] International Law Association, *Report of the 29th Conference, Portsmouth*, 1920, London, Sweet & Maxwell, 1920, p. 396.

[36] Hudson, *International Legislation, op. cit.*, Vol. 3, pp. 2019-2032.

[37] *Ibid.* Vol. 4, pp. 2354-2369.

[38] For text of The Hague air rules of 1923, see: Kenneth W. Colegrove, *International Control of Aviation*, Boston, World Peace Foundation, 1930, Appendix VI, pp. 211-223; Spaight, *Air Power and War Rights, op. cit.* pp. 498-508.

the passengers, if any." Similarly, in the exhaustive study on "Rights and Duties of Neutral States in Naval and Aerial War" made by the Harvard Research in International Law,[39] and in the draft convention prepared as the result of its study, the nationality of aircraft was accepted as the basis for the proposed rules so far as "aerial war" was concerned. In an earlier study made by the Harvard Research in International Law, dealing with "Jurisdiction with Respect to Crime," the conclusion reached was that "a State has jurisdiction with respect to any crime committed in whole or in part upon a public or private ship or aircraft which has its national character."[40] As to the status of aircraft, the comment on this provision says that "ships and aircraft are not territory" — that "it is recognized, nevertheless, that a State has with respect to such ships or aircraft a jurisdiction which is similar to its jurisdiction over its territory."[41] The commentary further notes that "it is of course true that most aircraft are much less self-contained than seagoing vessels at the present time" — that "it seems, however, that in their legal relations to their own State and to foreign States they have many points of resemblance and that they may well be regarded, for present purposes, in substantially the same way."[42]

The Institute of International Law reviewed its position on international air navigation at its meeting at Lausanne in 1927, and again held that every aircraft should have one nationality and one only, and that this nationality should be that of the country where the aircraft is registered.[43] Again, in 1937, when considering the question of conflict of laws on board "private aircraft," the Institute accepted nationality of aircraft as an existing status, using such language as "the State of the nationality of the aircraft."[44]

World War II and The Chicago Convention

With the outbreak of World War II aircraft became primary international carriers. The normal method of crossing both the Atlantic and Pacific Oceans, except for mass troop movements, was by air. The nationality of aircraft was accepted into customary international law as fully as the nationality of merchant vessels. The protective jurisdiction of the State of the flag and the responsibility of that State were fully recognized, whether the State of the flag of the aircraft was or was not a party to the Paris Convention or the Havana Convention (the Madrid Convention never having had actual international importance).

The Convention on International Civil Aviation, signed at Chicago in 1944, provides for classification, nationality and registration of

[39] *American Journal of International Law*, Vol. 33, 1939, Supplement, pp. 167-817.
[40] *Ibid.* Vol. 29, 1935, Supplement, p. 508.
[41] *Ibid.* p. 509.
[42] *Ibid.* pp. 516-517.
[43] *Annuaire de l'Institut de droit international*, Vol. 33 (3), 1927, p. 338.
[44] *Ibid.* Vol. 40, 1937, p. 276.

aircraft. Certain of its provisions are a compromise between the draft convention submitted by Canada,[45] and that submitted by the United States.[46] The Canadian draft followed almost exactly the language of the Paris Convention with respect to nationality. Included in its provisions was an article providing that military aircraft in foreign territory should enjoy, in principle, the privileges accorded to foreign ships at war. The United States draft covered only "civil aircraft."

Article 3 of the Chicago Convention, as signed, reads in part as follows:

> "(a) This Convention shall be applicable only to civil aircraft, and shall not be applicable to state aircraft.
>
> "(b) Aircraft used in military, customs and police services shall be deemed to be state aircraft.
>
> "(c) No state aircraft of a contracting State shall fly over the territory of another State or land thereon without authorization by special agreement or otherwise, and in accordance with the terms thereof.
>
> "(d) The contracting States undertake, when issuing regulations for their state aircraft, that they will have due regard for the safety of navigation of civil aircraft."

While there may be some seeming ambiguity between the provisions of subparagraph (a) of Article 3 and the subparagraphs (c) and (d) of this article, it was certainly intended to mean that the convention as a whole, with the exception of subparagraphs (c) and (d), should be applicable only to "civil aircraft."[47] The terms "public" and "private" are not used in the convention in the classification of aircraft. The convention is therefore applicable to all aircraft, whether owned and operated by a State, unless such aircraft are actually "used in military, customs and police services" by a contracting State. Due to the fact that the convention is primarily concerned with international civil air transport, no provision is made (as it was in the Paris convention) to define the privileges to be accorded in foreign territory to military aircraft as distinguished from other State aircraft.

The articles applicable directly to nationality of aircraft include:

> "*Article* 17. Aircraft have the nationality of the State in which they are registered.
>
> "*Article* 18. An aircraft cannot be validly registered in more than one State, but its registration may be changed from one State to another.
>
> "*Article* 19. The registration or transfer of registration of aircraft in any contracting State shall be made in accordance with its laws and regulations.

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[45] See: *Canadian Revised Preliminary Draft of an International Air Convention* [Chicago Conference Document 50], reprinted in: U.S. Dept. of State, *Proceedings of the International Civil Aviation Conference*, Chicago, Illinois, November 1-December 7, 1944 [Dept. of State Pub. No. 2820], Vol. 1, pp. 570-591.

[46] See: *United States Proposal of a Convention on Air Navigation* [Chicago Conference Document 16], reprinted in: *ibid.* Vol. 1, pp. 554-566.

[47] The writer of this study was chairman of the drafting committee which reported out parts of the convention, including Article 3, and therefore has no hesitation in criticizing and taking some responsibility for the draft.

> "*Article* 20. Every aircraft engaged in international air navigation shall bear its appropriate nationality and registration marks."

It will be noted that the Chicago Convention adopts the principle that each State will decide for itself the basis on which it will permit aircraft to be registered. Article 17, providing that aircraft have the nationality of the State in which they are registered, accepts the principle of Article 6 of the Paris Convention that "aircraft possess the nationality of the State of the register on which they are entered." This is a rule as between contracting States, but it certainly does not mean that "state aircraft" of all States and civil aircraft of non-contracting States are without nationality. By the time the Chicago Convention was drafted, customary international air law had so completely accepted the concept of nationality of aircraft that no question could possibly exist as to the fact of nationality of any aircraft lawfully carrying national insignia of a particular State.

Registration does not create nationality. It is simply an evidence of nationality, and nothing in the Chicago Convention should be read to the contrary.

State Is Protector of Aircraft and Guarantor of Its Conduct

The Chicago Convention assumes that aircraft are legal entities and directly recognizes the State as the guarantor of the conduct of aircraft possessing its nationality, as well as the protector of such aircraft. For example, Article 5 is a direct commitment of each contracting State to accord to "all aircraft of the other contracting States" certain transit and non-scheduled traffic privileges. If an aircraft has the nationality of a contracting State, it has the privileges contemplated under this article, and the State of its flag may proceed against any other State to enforce these privileges in international law for the benefit of its aircraft. Such aircraft are dealt with in the article directly as objects of international law. The resulting general position is quite analogous to that created since the fourteenth century by those international maritime law commercial treaties which accorded to merchant vessels of one contracting State the privilege of entering the ports and harbors of another contracting State.[48] The nationality of the operator is immaterial.

The status of an aircraft as a legal entity is further emphasized by such provisions as Article 11, providing that the laws and regulations of a contracting State relating to the admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation or navigation of such aircraft while within its territory "shall be applied to the aircraft of all contracting States without dis-

[48] See, for example, treaties between England and various other countries described in: David Macpherson, *Annals of Commerce, Manufactures, Fisheries, and Navigation . . .*, London, Nichols, 1805, Vol. 1, p. 551, 617, 631, 713, Vol. 2, p. 8.

tinction as to nationality and *shall be complied with by such aircraft* upon entering or departing from or while within the territory of that State." [italics supplied] Under this article the State of the nationality of the aircraft will be entitled to protect its aircraft in case of discrimination, but will also be responsible to guarantee the conduct of its aircraft as to compliance with the local rules.

Article 12 provides that each contracting State "undertakes to adopt measures to ensure . . . that every aircraft carrying its nationality mark, wherever such aircraft may be, shall comply with the rules and regulations relating to the flight and maneuver of aircraft there in force." The same article contains an entirely new principle in international air law to the effect that over the high seas the rules in force shall be those established under the convention. Each State therefore guarantees that aircraft having its nationality will comply, while over the high seas, with the rules set up under the convention, and, when in national territory of another State, will comply with the rules there applicable.

Considering the present text of the Chicago Convention and the history which preceded it, we can hardly deny that aircraft, like seagoing vessels, and unlike railway trains and automotive vehicles, now have that quality of legal quasi-personality in public international law known as "nationality." The development of air law, both by custom and international legislation, has demonstrated the soundness of the statement used in the report of the First Commission of the 1910 conference.[49] No one today can question the basic theses: (1) that an aircraft, to engage in international flight, should be placed under the control of a State which would be responsible to other States for the conscientious exercise of such control; (2) that setting off the obligations imposed on the aircraft in such international flight are the rights accorded to it, and that to enforce these rights the aircraft may need the protection of a State which, within the limits of international law, may intervene in its interest; (3) that this role belongs naturally to the State charged with control of the aircraft; (4) that the responsibility and right of protection joined in the hands of one and the same State constitute between that State and the aircraft a tie analogous to that existing between a vessel and the State whose flag it carries and which is called "the nationality of the vessel."

Major Problems Created by Acceptance of Nationality for Aircraft

But the acceptance into international air law of the principle that every aircraft must have nationality and that this nationality is at least similar to that of vessels has created cognate problems some of which still require settlement. These problems are of two general classes: (a) the rights of state aircraft, and (b) the respective jurisdiction and competence of the State of the flag of the aircraft and of other States.

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[49] See note 22 *supra*.

in whose territory the aircraft may be, to deal with matters occurring on board the aircraft. These questions must be resolved before it can be said that the legal status of aircraft has been finally determined for all places and for all conditions arising in international flight.

The Chicago Convention, as stated earlier, divides aircraft into two classes: state aircraft and civil aircraft, abandoning the older use of the terms "public" and "private." The provisions of Article 3 (b) and 3 (c) quoted above raise two questions. First, *is the definition of state aircraft adequate?* Second, *in the absence of special terms in the authorization contemplated by Article 3 (c), are military, customs and police aircraft to be treated alike when in foreign territory?*

As to the first of these questions it must be said that the Chicago Convention is purposely less definite than some of its predecessors. The language used was understood to be vague but was considered a more practical solution than any of the several attempts which had been made in the past to define such classes as, for example, military aircraft. The determining factor under the Chicago definition is whether a particular aircraft is, at a particular time, actually used in one of the three special types of services. If so, it is a "state aircraft." Otherwise, it is a "civil aircraft." This solution leaves for settlement, under the facts of a particular case, such difficult problems as those arising when aircraft operated by the armed services carry non-military passengers and cargo. These questions the governments affected must settle from time to time.

The second question, as to the status of state aircraft, is more difficult. The Paris Convention provided that in the absence of special stipulation military aircraft, when authorized to fly over the territory of another contracting State or to land therein, should enjoy "the privileges which are customarily accorded to foreign ships of war," but that these privileges should in no case be enjoyed by police and customs aircraft. It was felt that military aircraft had the same character of a political organ removed from every intervention by another sovereign power as had a foreign warship in a national port.[50]

Although the Chicago Convention is silent in the matter, the present writer feels that the rule stated in the Paris Convention is sound and may be considered as still part of international air law. But if it is desired that police and customs aircraft should enjoy similar exemption in the absence of stipulation to the contrary in the authorization given them to proceed to a foreign country, such exemption must be covered by an amendment to the Chicago Convention or by other international legislation.

The general and most important question still unsettled involves the respective competence and jurisdiction of the State of the flag of the aircraft and other States to deal with the matters occurring on board the aircraft. In the draft of the Paris Convention, as prepared by the

[50] Conférence de la paix, *op. cit.* pp. 433-434; *La Paix de Versailles, op. cit.* pp. 503-504.

Aeronautical Commission, this matter was proposed to be dealt with by the following article:

> "Article 23. All persons on board an aircraft shall conform to the laws and regulations of the State visited.
>
> "In case of flight made without landing from frontier to frontier, all persons on board shall conform to the laws and regulations of the country flown over, the purpose of which is to ensure that the passage is innocent.
>
> "Legal relations between persons on board an aircraft in flight are governed by the law of the nationality of the aircraft.
>
> "In case of crime or misdemeanor committed by one person against another on board an aircraft in flight the jurisdiction of the State flown over applies only in case the crime or misdemeanour is committed against a national of such State and is followed by a landing during the same journey upon its territory.
>
> "The State flown over has jurisdiction:
>
> 1. With regard to every breach of its laws for the public safety and its military and fiscal laws;
> 2. In case of a breach of its regulations concerning air navigation."[51]

But before the Paris Convention was actually signed, this article was omitted nor does any article in the Chicago Convention cover the same subject matter except to the very limited extent of Article 13 which is as follows:

> "Article 13: The laws and regulations of a contracting State as to the admission to or departure from its territory of passengers, crew or cargo of aircraft, such as regulations relating to entry, clearance, immigration, passports, customs, and quarantine shall be complied with by or on behalf of such passengers, crew or cargo upon entrance into or departure from, or while within the territory of that State."

In an effort to provide for settlement of the possible conflict in competence of the courts and applicability of the laws of the State of the flag and the State of the territory where the aircraft might be, in case they were not the same, the International Law Association drafted an international convention containing the following provisions:

> "(a) *Civil Jurisdiction*:
>
> ART. 1
>
> "The airship which is above the open sea or such territory as is not under the sovereignty of any State is subject to the laws and civil jurisdiction of the country of which it has the nationality.
>
> ART. 2
>
> "A public airship which is above territory of a foreign State remains under the exclusive jurisdiction of the State of which it has the nationality.
>
> "A private airship which is above the territory of a foreign State is subject to the laws and jurisdiction of such State only in the following cases:
>
> 1. With regard to every breach of its laws for the public safety and its military and fiscal laws.

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[51] Conférence de la paix, *op. cit.* p. 155.

2. In case of a breach of its regulations concerning air navigation.
3. For all acts committed on board the airship and having effect on the territory of the said State.

"In all other respects a private airship follows the laws and jurisdiction of the State of the flag.

"(b) *Criminal Jurisdiction*:

ART. 3

"If at the commencemment or during the progress of any flight of any aircraft passing over any State or States or their territorial waters or over the high seas without landing, any person on board such aircraft commits any crime or misdemeanour, the person charged shall forthwith be arrested if necessary. Such felony or misdemeanour may be enquired into and the accused tried and punished in accordance with the Rules given under Art. 2. The State of the place where such aircraft lands shall be bound to arrest the accused if necessary and to extradite him to the State which has jurisdiction over him.

ART. 4

"Acts committed on board a private aircraft not in flight in a foreign State shall be subject to the jurisdiction of such State, and any person or persons charged with the commission of such act shall be tried and, if found guilty, punished according to the laws of such State."[52]

This draft convention, prepared twenty-five years ago, still stands as the position of the International Law Association. The subject matter which it covers has not been included in any international legislation, nor have sufficient cases arisen to assume that the questions covered are settled as part of customary international law. The problem is still open. It can be settled only by an international convention which should be promptly adopted. Conflicts already exist between the statute laws of certain States.[53] As Lemoine has well said:

> "The determination of the law applicable to events occurring and acts performed on board an aircraft is a complex and difficult problem. It is only fragmentarily settled by positive law and the different national systems do not furnish altogether consistent solutions."[54]

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[52] International Law Association, *Report of the 33rd Conference, Stockholm*, 1924, London, Sweet & Maxwell, 1925, pp. 117-118.
For other proposals on the same subject, see: (1) "Chapitre VI, Code international de l'air," 5th Congress, Comité juridique international de l'aviation, Prague, 1922; (2) Articles 1-7 of proposal as to crimes committed on board aircraft, 9th Congress, CJIA, Budapest 1930; (3) Harvard Research draft convention on Jurisdiction with Respect to Crime, Article 1 (d), 3, 4, published in *American Journal of International Law*, Vol. 29, 1935, Supplement, pp. 439-635; Convention proposed by Institute of International Law, Luxembourg, 1937, in: *Annuaire de l'Institut de droit international*, Vol. 40, 1937, pp. 276-278; proposals of Dr. Alex Meyer in 1946 contained in "Crimes et délits a bord des aéronefs, *Revue générale de l'air*, IXannée (nouvelle série), 1946, pp. 544-558, 614-632.

[53] Harvard Research in International Law—Jurisdiction with Respect to Crime, *op. cit.* p. 515; Meyer, *op. cit.* p. 619.

[54] Maurice Lemoine, *Traité de droit aérien*, Paris, Recueil Sirey, 1947, p. 201. For a general discussion of conflicts of law affecting aircraft, see: Fernand de Visscher, "Les Conflits de lois en matière de droit aérien," Hague, Académie de droit international, *Recueil des cours*, Vol. 48, 1934-II, pp. 279-385.

B. *Responsibility of Aircraft.* As stated earlier in this study, aircraft unlike vessels and like railway trains and automotive vehicles are not yet considered as having the quality of responsibility in private law. As instrumentalities of international transport, aircraft are not directly responsible as are vessels for supplies, services and wrongdoings recognized as the bases for what are ordinarily known as maritime liens. Aircraft, like other chattels generally, may be held for the debts of the owner or, under certain local statutes, may be held for the satisfaction of specifific liens. But such claims against an aircraft do not have the characteristics of a maritime lien for which a vessel is responsible, in many cases irrespective of the responsibility of the owner, nor does international law recognize (in the absence of a statute or convention) the validity of claims against an aircraft when the aircraft has passed into the hands of a bona fide purchaser without notice of the prior claim.

It has been held, for example, that a lien for repairs performed on a seaplane in a shop on land is not a maritime lien and does not have precedence over a penalty government lien which accrued later in time. Without deciding what would have been the case if the repairs had been performed on the seaplane while it was in the water, the court held that the claim for repairs "is no better than a lien against an ordinary airplane," thereby holding that there is no claim generally recognized in international air law for a lien for repairs against an airplane as there would be in maritime law against a vessel.[55]

As to supplies furnished an aircraft, it may be noted that Article 25 of the Pan American Convention provided that "the commander of an aircraft shall have rights and duties analogous to those of a captain of a merchant steamer," but this provision was not repeated in the Chicago Convention. While it might have been argued that under the Pan American Convention the aircraft commander could obligate the aircraft in a foreign port for repairs and supplies as the captain of a merchant vessel may do, this provision is no longer in force even as between those States which were parties to the Pan American Convention. In fact, the draft convention "on the Legal Status of the Aircraft Commander" (originally drafted by CITEJA and now before the Legal Committee of the International Civil Aviation Organization)[56] does authorize the aircraft commander to buy items necessary for the

[55] *United States of America, Libellant of one Fairchild Seaplane, etc.*, appellant, v. *Northwest Air Service, Inc.*, appellee, U.S. Circuit Court of Appeals, 9th Circuit, December 20, 1935, 80 F. (2d) 804, cited in: *U.S. Aviation Reports*, 1936, pp. 148-149.

See also: *Andrew Foss v. Airplane Crawford Bros. No. 2*, U.S. District Court, Western District of Washington, June 27, 1914, 215 Fed. 269, cited in: *U.S. Aviation Reports*, 1928, pp. 1-3; Arnold D. McNair, *The Law of the Air*, London, Butterworth, 1932, Chap. 8, pp. 144-151.

The statements in 1921 by Judge Cardozo in *Reinhardt v. Newport Flying Service Corporation, et al.*, [232 N.Y. 115, cited in: *U.S. Aviation Reports*, 1928, pp. 4-7] to the effect that a hydroplane moored in navigable waters is a vessel was, in the judgment of the present writer, dicta and not necessary to the determination of the issues presented.

[56] International Civil Aviation Organization, Document No. 5190, LC/88, March 2, 1948, p. 3.

completion of the trip and to have repairs made which are necessary to enable the aircraft to proceed promptly. But the terms of the draft convention make it clear that this power given the aircraft commander is a power to obligate the owner and not to bind the aircraft itself. Further, Article 4 states definitely that "the Commander may not, without special authority, sell the aircraft, or, by any contractual act, mortgage or subject it to any similar claim." This draft convention appears to be a repudiation of any suggestion that the aircraft, irrespective of special authority from the owner, is responsible as a vessel would be for supplies and repairs in a foreign port.

Responsibility of the Aircraft for Salvage and Collision Claims

The characteristic responsibility of vessels for salvage services has been held not to apply to aircraft in the absence of special statute. This was held in a leading case in which it was determined that even a seaplane does not satisfy the definition or description of a ship or a vessel, and that the British Air Navigation Act of 1920 (10 & 11 Geo. 5, c. 80) was restricted to British and foreign aircraft within the limits of British territorial jurisdiction and to British aircraft all over the world, but they did not apply to salvage claims against a foreign aircraft or its cargo.[57] Section 11 of this Act had provided that the law relating directly to salvage of life or property should apply to aircraft on or over the sea or tidal waters as it applies to vessels. But this area was held to be insufficient to cover salvage by British vessels on the cargo of an American seaplane wrecked on the coast of Greenland. After the *Watson* case was decided, the British Air Navigation Act of 1936 (25 Geo. 5, & 1 Edw. 8, c. 44) sought to extend the provisions of British law to cover salvage claims against foreign aircraft and claims for salvage services generally outside the limits of British territorial waters. But irrespective of how these new provisions may be construed, obviously they are statutory provisions and not statements of existing international law. This is further borne out by the fact that the convention signed at Brussels entitled "The Salvage of Aircraft at Sea Convention, 1938" provides for an indemnity payable by the operator of the aircraft assisted, and for remuneration in case of salvage also payable by the operator of the aircraft, but no provision is included giving a lien against the aircraft such as would exist in maritime law against a vessel for which salvage services had been rendered.[58]

As further indication that international air law has developed in the general direction of denying that aircraft are responsible in private law as are vessels, it should be noted that Article 23 of the Paris Convention provided that with regard to the salvage of aircraft wrecked

[57] *Thomas Watson v. R.C.A. Victor Company, Inc.*, Great Britain, Aberdeen Sheriff Court, October 31, 1934, 50 Ll.L.R. 77, cited in: *U.S. Aviation Reports*, 1935, pp. 147-156.

[58] For text of the Brussels aircraft salvage convention, see: Hudson, *International Legislation, op. cit.* Vol. 8, pp. 135-147; Christopher N. Shawcross and Kenneth M. Beaumont, *Air Law*, London, Butterworth, 1945, Secs. 794-810, pp. 405-409; *U.S. Aviation Reports*, 1938, pp. 253-273.

at sea "the principles of maritime law will apply in the absence of any agreement to the contrary," and in the Pan American Convention it was provided that "the salvage of aircraft lost at sea shall be regulated, in the absence of any agreement to the contrary, by the principles of maritime law."[59] But the Chicago Convention omits any reference to salvage. If it be said that Article 23 of the Paris Convention and Article 26 of the Pan American Convention indicated an intent to adopt the general principles of salvage, including a lien against the aircraft or cargo which had been salved, the omission of these provisions from the Chicago Convention and the signature at Brussels in 1938 of a specific convention applicable to salvage omitting any claim for lien against the aircraft is adequate evidence that no such lien now exists in international air law.

The characteristic lien against a vessel for damages caused by it when in collision with another vessel also does not apply to aircraft. As authoritatively stated by McNair, collisions between aircraft are governed by principles applicable to torts generally.[60] Even in the case of damage to a ship caused by an aircraft, though the admiralty court might have jurisdiction, no maritime lien would attach to the aircraft. The action "on behalf of the ship against the person responsible for the aircraft would be *in personam* and could not lie *in rem*."[61] In the draft convention "for the Unification of Certain Rules Relating to Aerial Collisions,"[62] now pending before the Legal Committee of the International Civil Aviation Organization, provision is made for the payment of an indemnity by the operator of the aircraft responsible in case of collision between aircraft. No provision is made for a lien against the aircraft itself irrespective of the indemnity due by the operator. The principle of responsibility of the aircraft as a legal quasi-personality is entirely absent in the draft convention on collision just as it is also absent in the salvage at sea convention applicable to aircraft signed at Brussels in 1938 and discussed above.

The Convention on "the International Recognition of Rights in Aircraft" signed at Geneva in 1948 provides the first recent (and very limited) international legislation for what might be called responsibility of aircraft. In Article 4 of that convention it is provided that in the event that any claims in respect of compensation for salvage or extraordinary expenses give rise "under the law of the Contracting State where the operations of salvage or preservation were terminated, to a right conferring a charge against the aircraft, such right shall be recognized by Contracting States and shall take priority over all other rights in the aircraft." Such rights may be noted on the record within three months and shall not be recognized by other contracting States

[59] For the possible effect of these two conventions, had they remained in force, see: Arnold W. Knauth, "Aviation and Salvage: The Application of Salvage Principles to Aircraft," *Columbia Law Review*, Vol. 36, 1936, p. 234.

[60] McNair, *op. cit.* p. 99.

[61] *Ibid.* p. 102.

[62] International Civil Aviation Organization, Legal Committee, Sub-committee "Rome," Working Draft No. 27, May 27, 1949, p. 17.

after expiration of the three months period unless the right has been noted on the record and the amount has been agreed upon or judicial action on the right has been commenced.[63] It would appear that this convention will give international force to compensation due for salvage or preservation services if the State in which such operations are completed creates a lien against the aircraft for such charges, and provided the claimant carries out the technical requirements of recording the claim in the State of the registry of the aircraft and proceeds to enforce it as required by the convention. The inclusion of these provisions seems conclusive proof that international air law generally does not recognize responsibility of the aircraft for such claims.

4. Conclusions and Recommendations

From the foregoing it is submitted that aircraft, like vessels, and unlike railway trains and automotive vehicles, now have that quality of legal quasi-personality in public international law discussed above as *nationality*, but that unlike vessels, and like railway trains and automotive vehicles, aircraft are not yet considered as having the quality of personal *responsibility* in private law. The legal status of aircraft is therefore *sui generis* and places them in a class apart from other instrumentalities of commerce.

Resulting from the acceptance into international air law of the nationality of aircraft, certain cognate problems require solution. As to the first of these — whether the distinction between state and civil aircraft in the Chicago Convention is sufficient — it is submitted that the solution there presented should be allowed to stand unless and until international practice indicates that confusion has resulted. No such evidence is at this time available. As to the treatment to be accorded State aircraft when in foreign territory, it is likewise submitted that no additional international legislation is at this time needed. The Chicago Convention provides that no state aircraft, whether military, customs or police, may enter foreign territory except under special authorization. No good reason seems to exist as to why such authorizations cannot from time to time determine the extent to which such state aircraft may be exempt from local jurisdiction when entering such foreign territory, although this question deserves further study.

But the general question as to the conflict of competence of the courts and applicability of laws of the State of the flag of the aircraft and other States does require solution. This must be found in new international legislation.

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[63] For text of the convention and an excellent analysis of the difficult problems created by these provisions, see: Nathan G. Calkins, Jr., "Creation and International Recognition of Title and Security Rights in Aircraft," *Journal of Air Law and Commerce*, Vol. XV, 1948, pp. 156-181, and Text of the Convention at page 348 of Vol. XV. Richard O. Wilberforce, "The International Recognition of Rights in Aircraft," *International Law Quarterly*, Vol. 2, 1948, pp. 421-458.

Some of these matters may be discussed at the meeting of the International Law Association to be held in Copenhagen in August 1950. In preparation for that meeting, the American Branch of the Association has adopted, among others, the following recommendations:

a) that the question of the legal status of aircraft and international law problems arising therefrom be the subject of further study by the International Law Association and its Committee on Air Law;

b) that this study include the question of whether or not the Chicago Convention should be amended so as to provide a uniform basis internationally for the registration of aircraft, or whether the convention should be left as now drafted so that each State may determine for itself the conditions and legal requirements to be fulfilled by aircraft registerd in such State—such conditions as to the status of persons applying for registration;

c) that this study include the question as to whether agreements should be made internationally as to the status of aircraft operated by international agencies or other "stateless aircraft";

d) that an international convention should be drafted and adopted to cover conflicts arising in the jurisdiction of courts and the law applicable to occurrences on board aircraft;

e) that the draft convention recommended by the International Law Association at Buenos Aires in 1922 and at Stockholm in 1924 be used as the basis for the preparation by the International Law Association of a modernized draft;

f) that the International Law Association call to the attention of the International Civil Aviation Organization the need for such a convention and offer to cooperate in its final preparation.

INTERNATIONAL

Department Editor: Joan H. Stacy *

EXCERPTS FROM REPORT OF U.S. DELEGATION TO THE FOURTH SESSION OF THE ICAO ASSEMBLY

THE Fourth Session of the Assembly of the International Civil Aviation Organization was held in Montreal from May 30 through June 20, 1950. The 1949 or third session of the Assembly was limited almost entirely to budgetary and administrative problems, so the fourth session was the first full-scale session, covering all phases of the Organization's work since 1948. 42 out of a total of 58 member States of ICAO were represented at the Assembly. Two non-member States, Ecuador and Uruguay, as well as 11 international organizations, attended the Assembly as observers.[1]

The work of the conference was divided among the plenary body, the Executive Committee, the Administrative Commission, the Technical Commission, the Economic Commission and the Legal Commission. The provisional agenda drawn up by the Council [2] was adopted without change by the Assembly at its second plenary meeting on May 31, 1950.

A summary of the most important work undertaken by the Executive Committee follows:

Agenda Item 17: *Suspension of voting power of Contracting States failing to discharge their financial obligations to the Organization*

Agenda Item 23: *Contributions in arrears*

The Committee recommended and the Assembly agreed (Resolution A4-2 [3] that the voting power in the Assembly, the Council and its subsidiary bodies, excluding regional meetings, be suspended of six States which were in arrears of their contributions for periods prior to June 30, 1948—Bolivia, El Salvador, the Hashemite Kingdom of the Jordan, Nicaragua, Paraguay and Poland—until such time as they should pay these back dues in full or make other satisfactory arrangements with the Organization. The Assembly also authorized the Council to deprive the six financially delinquent States of the right to general services furnished by ICAO, provided such suspension would not interfere with the safety, regularity or efficiency of international air navigation. On a recommendation of the Executive Committee, the Council was authorized to discuss and conclude arrangements with any States in arrears of their contributions to the Organization, such arrangements to be subject to confirmation by the next session of the Assembly.

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* Aviation Planning Staff, Department of State.

[1] The following officers were elected by the Assembly: President (and Chairman of Executive Committee): His Excellency Kamil Abdul Rahim Bey (Egypt); First Vice-President: Group Captain the Honorable T. W. White (Australia); Second Vice-President: Captain Mario Torres Menier (Cuba); Third Vice-President: Mr. Fernand Hederer (France); Fourth Vice-President: Sir Frederick Tymms (United Kingdom).

The following were the chairmen of the Commissions: Administrative Commission: Vice-Commodore Augusto R. Beni (Argentina); Technical Commission: Mr. A. P. Dekker (Netherlands); Economic Commission: Mr. E. C. R. Ljungberg (Sweden); Legal Commission: Mr. E. T. Nunneley (United States).

[2] ICAO Doc. A4-WP/1, 17/2/50; 17 J. AIR LAW & C. 220.

[3] Resolutions and Recommendations, Fourth Session of the ICAO Assembly, ICAO Doc. 7017, A4-P/3, 20/6/50.

Agenda Item 12: *Election of Contracting States to be represented on the Council and obligations of Council Member States*

The Committee recommended and the Assembly adopted a resolution (A4-1) which commits Council member States to provide full-time representation at ICAO headquarters in Montreal. Since there were only 20 candidates for the 21 seats on the new ICAO Council and the 20 States together satisfied individually and collectively the requirements for membership under Article 50 of the Chicago Convention, the Assembly accepted the Executive Committee's recommendation that all candidates be voted on in a single secret ballot. The following States were elected to serve as ICAO Council members during the three-year period, which began immediately after this session of the Assembly adjourned:

Argentina	France	Philippine Republic
Australia	India	Portugal
Belgium	Iraq	Union of South Africa
Brazil	Ireland	United Kingdom
Canada	Italy	United States of America
Denmark	Mexico	Venezuela
Egypt	Netherlands	

Venezuela, Italy, South Africa and the Philippines are the new members of the Council. States which did not stand for reelection to the Council were Peru, Chile, Czechoslovakia, Turkey and China, which notified the United States Government, as depositary for the Chicago Convention, on May 31, 1950 of its intention to denounce the Convention. All other members of the first ICAO Council were reelected. One seat on the new Council remains vacant. The Assembly is obligated under the terms of the Convention to fill this seat as soon as there is a candidate.

Agenda Item 14: *Policy and programme with respect to amendment of the Convention*

The Executive Committee approved and the Assembly adopted a resolution (A4-3) which specified (a) that amendments to the Convention may be appropriate when they are proven necessary by experience and/or are demonstratably desirable or useful; (b) that modification of the Convention should be by specific amendment rather than general revision; (c) that Article 94 (the amending article) of the Convention should be maintained in its present form; and (d) that no specific procedure to be incorporated in the protocols of amendment should be adopted by the fourth session of the Assembly.

Added to this resolution was a clause, proposed by the United Kingdom, directing the Council to consider any specific amendment (other than an amendment of Article 94) proposed either before or after this session of the Assembly; also clauses proposed by Canada stating that the Council itself should not initiate any proposal for amendment unless of an urgent nature and directing contracting States to submit to the Council any proposals for amendments six months in advance of the session of the Assembly at which they are to be considered. A draft resolution introduced by the Latin American States, to amend the Convention to permit the Assembly to move the headquarters of the organization away from Montreal was approved by the Executive Committee but failed to receive the necessary two-thirds majority at a plenary meeting of the Assembly.

Agenda Item 16: *Review of the Structure of ICAO*

The Executive Committee, after discussing at length a proposal submitted bp Portugal suggesting the abolition of the Legal Committee, adopted a resolution later approved by the Assembly (A4-5), directing the Council to study the organization of ICAO's legal work and the relationship of the

Legal Committee to the Council and the Secretariat and submit proposals for any change found necessary to an early session of the Assembly. The Executive Committee approved and the plenary body of the Assembly adopted a resolution (A4-4) directing the Council to obtain from all contracting States nominations for the vacant seats on the Air Navigation Commission and not to discourage non-Council member States from making nominations.

Agenda Item 15: *Character and Scope of future sessions of the Assembly*

The Assembly decided to hold its next full-scale session in 1953. Limited sessions will be held in the two intervening years. Although the limited sessions will probably be devoted primarily to budgetary and administrative matters, items on any other subject may be added to the agenda.

ADMINISTRATIVE COMMISSION

Agenda Item 20: *Budget* 1951

The Administrative Commission and the Assembly adopted a resolution (A4-25), submitted by India, which authorizes a total gross expenditure by the Organization in calendar year 1951 of Canadian $3,000,000 plus any additional casual revenue derived from the application of the staff assessment plan. Allocation of the $3,000,000 among the various parts of the budget was authorized as follows:

Meetings	$ 100,000
The Secretariat	2,210,000
General Services	550,000
Equipment	55,000
Other Budgetary Provisions	85,000
Total Gross Expenditure	$3,000,000

Funds are to be provided as follows:

(a)	by ASSESSMENT TO CONTRACTING STATES	$2,600,000
(b)	by appropriation from Working Capital Fund	132,000
(c)	by appropriation from General Fund Reserve	80,000
(d)	by income from Casual Revenue (estimated)	188,000
		$3,000,000

The $3,000,000 budget approved by the Assembly represented a $250,000 cut from the amount recommended by the Council, which had itself pruned the Secretary General's original estimate by $190,000. While there was a general feeling in the Commission that the budget proposed by the Council was carefully related to the work program and was well-balanced as between its various parts, many States had come to the Assembly with instructions to vote for a reduction in the cost of operating the Organization. Desire for economy was attributed to the effect of the widespread devaluation of currencies on member States' contributions to the Organization; concern over the upward trend in the cost of operating ICAO; and the total impact of the cost of participation in the various UN organizations. Some States, including India, were apparently influenced by the fact that their rates of assessment had been increased for 1951 in consequence of the adoption of new principles of assessment. Apart from these financial reasons, there was also some desire to slow down the Organization's work in order to allow smaller States more time to implement ICAO's decisions.

Agenda Item 21: *Apportionment of contributions among Contracting States*

The Administrative Commission first proceeded to examine a set of principles for assessing contributions, which the third session of the Assembly had directed the Council to prepare. Capacity to pay (to be given a weight of 75%); interest and importance in civil aviation (to be given a weight

of 25%) and benefits to be derived from the Organization (as a qualifying factor); a minimum contribution of approximately $4,000 and the use of a unit system were all approved in accordance with the recommendations of the Council. However, on the matter of the maximum contribution, the Commission changed the recommendation of the Council that the largest contribution should not exceed 25% of the budget and added a directive to the Contributions Working Group that the maximum contribution to be paid by any one contracting State in 1951 should be 25% of the budget.

On the basis of these principles and after hearing the various States present their cases, the Contributions Working Group proceeded to draw up suggested scales of assessments totaling 1500 units. Although Austria, Cuba, India, Israel, Peru, Switzerland, the Union of South Africa and the United States all requested reductions in their assessments as recommended by the working group, the Commission amended the assessment of Austria only, reducing its contribution from four to two units. In order that the U.S. contribution not be more than 25% as a result of the reduction in Austria's assessment, the U.S. assessment was changed from 375 to 374 units (24.98% of the total assessments), making the total number of units assessed to all member States 1497 instead of the original 1500. This scale of contributions for 1951 approved by the Administrative Commission was adopted by the Assembly as Resolution A4-26.

Agenda Item 22: *Acceptance of contributions for the financial year* 1951 *in currencies other than dollars.*

The Commission approved and the Assembly adopted a resolution (A4-29) along the lines of one adopted at its 1949 session authorizing the Secretary General, after consultation with the President of the Council, to accept a portion of the contributions of contracting States for future years in currencies other than dollars. The resolution differed from the one adopted in 1949 only in that it was not restricted to any particular financial period.

Agenda Item 24: *Cost of Language Services*

The Commission rejected a proposal by the Netherlands that the cost of providing interpretation and documentation in the three working languages of ICAO, additional to the expenditure that would be incurred if a single language were used, be separated from the main budget and allocated only among States whose national languages are included among these working languages. The Commission and the Assembly then approved a resolution (A4-30) that there be no separate allocation of language costs in ICAO.

Technical Commission

The Commission considered all items on the agenda and for convenience in discussions expanded the general agenda items into a number of specific subjects.

Agenda Item 27; *General review of the work of the Organization in the technical field*

The Commission was in general satisfied with the accomplishments of the Organization.

Agenda Item 27 (*a*) (*i*), (*ii*) *and* (*iii*): *International Standards and Recommended Practices* (*Annexes to the Chicago Convention*)

The Commission recognized that a number of Annexes had come into force and emphasized the importance of careful drafting in the Annexes to make certain that they are free from errors or defects in language, both as to expression of intent and as to translation into the different working

languages of ICAO. It was agreed that amendments to the Annexes should be limited to those desirable in the interest of safety and regularity in air navigation and that changes in format or phraseology only for the purpose of improving the drafting should be discouraged.

The Commission studied the relationship between the Procedures for Air Navigation Services (PANS) and Supplementary Procedures (SUPPS) and the Annexes. It recommended a resolution (A4-7) urging Contracting States to apply the principles of Article 38 of the Convention by notifying the Organization of national differences from relevant PANS and SUPPS when such differences affect the safety or regularity of international air navigation. The resolution also directed the Council to insure that PANS are incorporated in the appropriate Annexes when such procedures have become sufficiently stable. The Council was also directed (Resolution A4-8) to insure that the preparation of Standards involving the provision and operation of facilities and equipment, while insuring safety and regularity, take into account the importance of securing the correct balance between the economic aspects of, and the operational requirements for, such Standards. The object of such a directive was to insure that unnecessary economic burdens would not be placed on States through the implementation of Standards based solely on the requirements of areas of high traffic density. The Council was urged to complete its study of the application of Article 38 to domestic operations.

Agenda Item 27 (*a*) (*iv*): *Activities and program of ICAO in the field of aircraft accident investigation*

The Commission found that in the study of Agenda Item 29, covering the privileges and obligations of contracting States with respect to accident investigation other than the State of registry or the State of occurrence, it was also desirable to study the privileges and obligations of the State of registry. Consequently, Item 27 (a) (iv) was added to the agenda of the Technical Commission.

The U.S. proposed that the Commission interpret Article 26 of the Chicago Convention on investigation of accidents. This proposal was opposed by a number of States on the grounds that the draft annex on accident investigation had already been submitted to States for comments, and that further study by the Air Navigation Commission and Council was planned before the Annex was adopted; therefore an interpretation of Article 26 by the Assembly would be premature and might prejudice the studies of the Air Navigation Commission and the Council. There was a general exchange of opinions on the desirability of reaching agreement on the intent of Article 26, with most delegates opposed to such action by the Assembly. The Commission, after this discussion, approved a resolution (A4-9) directing the Council to undertake a study of the interpretation, application, and limitations of Article 26 of the Convention and to advise States of the results of the study. The Council was further directed to take action within the framework of the Convention to improve the efficacy of aircraft accident inquiry, or if no other action is possible to achieve this aim, to submit its recommendations concerning an amendment of the Convention to a future session of the Assembly.

Agenda Item 27 (*b*) (*i*), (*ii*) *and* (*iii*): *Technical Divisions*: *Review of work and organization*

The Commission studied a proposal by the U.K. for the amalgamation of the RAC and SAR Divisions. It considered that detailed examination of the Organization was not appropriate for the Commission but directed the Council (Resolution A4-10) to study the organization of the technical divisions with a view to increasing their efficiency by the elimination of possible

duplication of functions. The Commission agreed (Resolution A4-11) that wider use should be made of special meetings for the study of problems of substantial interest to more than one Division, and whose agenda would be limited to such special problems.

Agenda Item 27 (*c*): *Regional Air Navigation Meetings*: *Review of work and organization*

The Commission agreed that Regional Air Navigation (RAN) Meetings should be continued but that greater use should be made of small meetings dealing with specific problems relating to definite geographical areas. The Commission also considered that the consolidation of some existing regions might be desirable to enable more complete treatment of common problems. A French proposal to give more emphasis to the economic and joint support problems at Regional Air Navigation Meetings was not well received by the majority of States. The Commission, however, recognized that a RAN meeting is one of the steps in any joint support scheme and recommended (A4-Rec. 3) that at future RAN meetings the deficiencies in the implementation of regional plans which are vital to the proper functioning of the plan should be segregated and referred to Council for such special action as might be appropriate.

Agenda Item 27 (*d*): *Aims and scope of the Aviation Training Programme*

The Commission endorsed in principle (Resolution A4-12) the action which had been taken by Council to initiate an aviation training program of limited scope. The Council was directed to give consideration to the following principles in connection with the aviation training program: (a) that training is primarily the responsibility of contracting States; (b) that the role of ICAO is to facilitate cooperation among States, particularly in those matters where the lack of adequate training may adversely affect the safety or regularity of international air navigation; (c) that the ICAO training program should not duplicate activities of the States; (d) that a specific program should be approved only after careful examination of the requirements for, and the budgetary aspects of, such program; (e) that the ICAO program should be limited to encouragement, advice and coordination and should not involve the actual operation of training centers.

Agenda Item 28: *The recognition for the purpose of export and import of certificates of airworthiness conforming to ICAO Standards*

The action taken by the Commission and the Assembly (Resolution A4-13) was to direct the Council to initiate a study of the question of recognition for export and import purposes of airworthiness certificates issued in compliance with ICAO Standards, with a view to offering a resolution on this subject to contracting States. Priority is to be given in the study to the provision by the exporting State to the importing State of technical information that would be of value in concluding interim arrangements. The study is also to include the advantages which should accrue from such recognition of certificates of airworthiness, both to the exporting and importing States; also recommendations for methods of dealing with the interim period during which complete airworthiness Standards will not have been adopted.

Agenda Item 29: *Examination of Article* 26: *Privileges and obligations of Contracting States other than the State of Registry or the State of Occurrence with respect to accident investigation*

The U.S. Delegation pointed out that not only might the State of occurrence and the State of registry be involved in an accident investigation, but also another State whose facilities and services were used by the aircraft prior to the accident. The third State might have information which

would contribute materially to the determination of the cause of the accident. In addition, information reflecting on the airworthiness of the aircraft or useful to effecting improvement in safety might result from the inquiry. This information would be of value to the State of manufacture of the aircraft in producing safer aircraft. The Commission recognized the value of obtaining information from a third State and agreed that the State of manufacture should be furnished with pertinent information.

The Commission approved a draft resolution:

> "That it is of great importance for the general improvement of the safety of air navigation that, to the greatest practicable extent—
> (1) a Contracting State other than the State of Registry or the State of Occurrence, whose facilities or services were used by an aircraft prior to an accident, submit to the State which is conducting the inquiry any pertinent evidence in its possession for consideration at the inquiry;
> (2) the State conducting the inquiry accord any State providing evidence the opportunity of appointing observers who would be permitted to present evidence and be associated with the technical part of the inquiry to the extent that such evidence is involved;
> (3) a Contracting State in which an accident has occurred involving aircraft other than of its manufacture communicate to the State of manufacture as soon as possible any pertinent information which results from the inquiry and which may reflect on the airworthiness of the aircraft type or its equipment, or which might be used to effect improvement in safety."

However, at the final plenary meeting of the Assembly, the Delegate of India proposed deletion of that part of the second resolving clause dealing with the presentation of evidence and the association with the inquiry, the amended clause of the resolution (A4-14) to read as follows: "the State conducting the inquiry accord any State providing evidence the opportunity of appointing observers." The proposal of the Delegate of India was carried by a vote of 17 to 13 with 3 abstentions.

Economic Commission

The plenary body of the Assembly adopted without change the final report of the Economic Commission, including all draft resolutions contained therein.

Agenda Item 32: *Statistical Programme of the Organization*

Delegates in the Commission were fully cognizant of the need for improvement by many contracting States in fulfilling their obligation under Article 67 of the Chicago Convention for filing air transport statistics with the Organization. The United Kingdom and other States advocated an early meeting of the Statistics Division as a means of solving the problem. The United States objected to such a meeting and suggested that more progress might be made in obtaining complete data through visits by members of the ICAO Secretariat to the various States in order to give statistical advice and assistance. The Commission decided that it was up to the Council and the Secretary General to determine specific courses of action to be taken. It agreed to recommend a resolution (A4-19) calling upon contracting States to provide promptly the statistics required by the Organization and directing the Council to give a higher priority to those portions of the statistical work program which are directly concerned with securing compliance with the reporting requirements.

Agenda Item 33: *Obstacles encountered in the implementation of Annex* 9—*"Standards and Recommended Practices for the Facilitation of International Air Transport"*

The resolution (A4-18) recommended by the Commission for adoption by the Assembly strongly endorsed ICAO's program for the facilitation of inter-

national air transport and expressed satisfaction with the progress made. It urged contracting States to bring to the attention of the interested departments of their governments the importance of conforming with the provisions of Annex 9, which imposes certain maximum limitations on the amount of paper work and other red-tape restricting freedom of movement and requires certain minimum facilities to speed the flow of international air traffic. The resolution drew the attention of all member States to two means of bringing their national laws and regulations into conformity with Annex 9: (1) through the creation of facilitation committees and (2) by taking advantage of favorable circumstances prevailing within certain regions or along specific routes.

Agenda Item 32: *Joint Ownership and Operation of International Air Serv-*

The Commission heard a report by the Secretariat on the steps taken thus far in ICAO and the United Nations toward an expanded program for giving technical assistance to under-developed countries (Point IV Program). Several of the delegates raised questions on the administrative details of this program, which will be carried out by the United Nations and five specialized agencies. The Commission then agreed upon a resolution (A4-20) approving the action so far taken by the Council toward cooperation in the U.N. program and directing it to take whatever further steps might be necessary to ensure ICAO's effective participation. The cooperation of contracting States was solicited in assisting ICAO in obtaining competent experts, technicians and training facilities and, in the case of States requesting assistance, in providing the personnel and financial support necessary to ensure lasting benefits for their civil aviation from the technical assistance projects.

Agenda Item 32: *Joint Ownership and Operation of International Air Services on Trunk Routes*

Discussions in the Economic Commission on this item revealed that there were two schools of thought on the role ICAO should play in this matter in the immediate future. The United States, Australia, Egypt, India, Ireland and the Netherlands made it clear that they agreed with the Council's recommendation that no further study be undertaken of joint planning and operation of international air services until some group of States made some specific proposal on the subject. These States felt that there were more concrete problems in other fields to which the time and money of the Organization should be devoted. In the other camp were those States, led by France, which felt that the Organization should continue its study and that the Council, pursuant to Articles 55(a) and 78 of the Chicago Convention, should recommend that certain groups of States study and establish joint operating organizations in a particular region or on a particular route.

After it became evident that a majority favored discontinuance of the study by the Council of joint ownership and operation, the Commission reached unanimous agreement on adoption of a resolution (A4-17) merely inviting contracting States with experience in joint operation of international air services to submit full information to the Council on this experience, so that it might be made available to all contracting States. In addition, the resolution directed the Council to give assistance, when requested, to States who themselves or whose airlines take the initiative in developing cooperative arrangements.

Agenda Item 30: *Commercial Rights in International Air Transport under Articles* 5 *and* 6 *of the Convention*

The Council had recommended that the Assembly merely endorse its plan for future work on the problem of analyzing the different air transport rights conferred under Articles 5 and 6 of the Chicago Convention and the

problem of distinguishing between non-scheduled and scheduled international services. The Council had by no means completed the program of work outlined for it under Assembly Resolutions A2-17, A2-18 and A2-19 of June 1948. To this end, it had adopted in March 1950 a resolution (1) urgently requesting contracting States to submit further comments on the Air Transport Committee's paper "Analysis of the Rights Conferred by Article 5" [4] and (2) directing the Committee to begin not later than September 1950 to revise this analysis with a view to its adoption by the Council as a guide for contracting States in their application of the provisions of Article 5.

The Economic Commission was in general agreement with the procedure proposed by the Council for attacking the problems raised by Articles 5 and 6. A difference of opinion, however, arose over a proposal of the United Kingdom Delegation that priority should be given to the question of a definition of a "scheduled international air service." Some States agreed with the U.K. view that the meaning of Article 5 could not be analyzed without first deciding on the type of flights it was intended to cover. Other States followed the U.S. view that no useful definition could be drawn up until Article 5 and the rights conferred therein had been analyzed. The U.K. proposal was adopted, although by a very small majority. Consequently, the resolution adopted by the Assembly (A4-15) approves in principle the procedure proposed by the Council, provided that the Air Transport Committee gives priority to a definition of a "scheduled international air service," as requested in Resolution A2-18 for the guidance of contracting States in applying Articles 5 and 6 of the Convention.

Agenda Item 36: *Other business arising out of the Report of the Council on the progress of work in the economic field*

The Commission approved the sections of the report and supplementary report of the Council to the Assembly dealing with economic problems.

A resolution on international airmail, initiated by Canada in the Commission under this item, was adopted by the Assembly (A4-21). This resolution removes the restriction placed on the Council by Resolution A1-44 of May 1947 whereby the Council was directed to refer any expression of opinion or recommendation concerning policy matters in the field of international airmail to contracting States for comment prior to transmittal to the Universal Postal Union. Under the new Assembly resolution, the Council may make its own decision as to whether or not prior circulation to contracting States of a policy communication to the UPU would be desirable.

Those States that advocated adoption of this resolution felt that the restriction on the Council's action was now unnecessary in view of the stage to which ICAO's studies on international airmail had advanced; that this restriction prevented the Council from replying within a reasonable length of time to questions raised by the UPU; that such a restriction implied a lack of faith in the Council, which had been elected by all contracting States as a representative body, and that it might result in bare facts being transmitted to the UPU without sufficient explanatory material of the type included by the Council. The United States, along with the United Kingdom and others, opposed adoption of the resolution on the grounds that the restriction is still a wise one in the complex field of international airmail where the comprehensive knowledge of governments is of value. Furthermore, the Council had not complained about the restriction imposed by Resolution A1-44. ICAO should be especially sure of its ground in dealing with other international organizations, particularly in fields like international airmail where difficulties had occurred in the past and seemed likely to recur in the future.

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[4] ICAO Doc. 6894, AT/694, 26/8/49.

Agenda Item 31: *Further Action to secure a Multilateral Agreement on Commercial Rights in International Air Transport*

The Commission followed the recommendation of the Council and engaged in no discussion of the substantive problems connected with this item. The resolution which the Commission recommended to the Assembly for adoption (A4-16) merely endorsed the procedure whereby the Council advanced to April 1, 1951 the date by which contracting States are to submit their views on a multilateral agreement, in accordance with Resolution A2-16 of June 1948, and urged contracting States to comply. The resolution left to the Council to recommend any further action to be taken on this problem of a multilateral agreement on commercial rights in international air transport.

The major debate in connection with this item had centered around a proposal, made by the Netherlands and supported vigorously by France and Mexico, that the Assembly resolution include a specific suggestion that the Council call a meeting of a multilateral commission prior to the next major session of the Assembly. This proposal was defeated.

LEGAL COMMISSION

Agenda Item 37: *Consideration of a draft Convention on Damage Caused by Aircraft to Third Parties on the Surface*

This was the only item of major substantive importance on the agenda of the Legal Commission. The draft convention had been sent to the Assembly by the ICAO Legal Committee after a vote in which a substantial minority, including the United States, the United Kingdom and several other States, voted against such submission on the ground that the draft was not sufficiently perfected to form the basis of Assembly action. Early in the discussions of the Legal Commission, it became clear that the study of the draft convention by the States participating in the deliberations of the Commission had convinced the majority of them that the draft convention could not be accepted without substantial amendment.

It was also clear that a number of States had not had sufficient time to finalize their positions with respect to the draft, partially by reason of the fact that the four-month period for study by ICAO member States provided for in Resolution A1-48 had not been complied with completely. The Commission nevertheless considered the Convention from a substantive point of view and adopted a number of proposed revisions which contribute to the progress in obtaining a final draft.

As a result of its study, the Commission recommended and the Assembly adopted a resolution (A4-22) directing that the draft convention, with the amendments adopted by the Commission, be referred to the ICAO Legal Committee for consideration and finalization, if possible, at its next session. It was recommended that the draft convention, together with the report of the Legal Commission and its annexes, consisting of the reports of three working groups of the Commission, be circulated to the Contracting States and to non-Contracting States and international organizations invited to the Assembly, with a request for comments to be submitted not later than November 1, 1950. It was also recommended that any final draft prepared by the Legal Committee at its next session be placed on the agenda of the next session of the Assembly if the period of four months provided for in Resolution A1-48 can be respected, or on the agenda of a special conference convened by the Council at the earliest date possible after the opening and in the course of the next session of the Assembly.

Four problems of major importance which became evident during the Commission's consideration of the draft convention may be reviewed briefly as follows:

(1) The definition of the term "operator" as contained in the draft convention was believed by the United States and a number of other States to be deficient. A working group of the Commission was assigned the task of redefining the term "operator," and as a result, a new definition was accepted by the Commission on the basis of the report of the working group. The new definition is believed more adequate than the previous definition.

(2) The draft provided for absolute liability of the operator up to certain limits and for additional liability of three times the absolute limit in cases where the operator was proven to be negligent. Early in the discussions it became apparent that it would be impossible to obtain agreement at this session of the Commission on retention of this system of liability. The United States desired to have the limits of liability for negligence four times the limits of liability on absolute liability. A number of other States recommended that the liability for negligence should be only twice that for absolute liability. Still other States were unwilling to accept the system as drafted. In order to allow the States to reconsider their positions and to formulate more definite ideas on the subject, the Commission retained in the draft convention the provisions already there and recommended that the matter be given further study by the Legal Committee.

(3) Two proposals for the adjudication of claims arising under the Convention were contained in the draft convention. The Commission entrusted detailed study of these proposals to a working group. The working group was able in the time available to it to make a detailed study and propose a number of revisions with regard to the first proposal, namely, a proposal providing for adjudication of claims in the State where the damage occurred and execution of such judgments, where required, in other Contracting States. The second proposal provided for permitting the defendant to deposit funds in a designated court and for all claims to be settled out of the funds thus deposited. In as much as the decision on this point was not completed, the Legal Committee, meeting briefly after the Legal Commission adjourned, authorized the working group to continue the study of the problem and report to the next meeting of the Legal Committee in January 1951.

(4) The draft convention contained provisions relative to the requirement of insurance for aircraft operators, such insurance to be required at the option of the State flown into. In as much as the ICAO Air Transport Committee had been studying problems relating to insurance requirements, a working group of the Legal Commission was appointed to coordinate the positions on insurance in the draft convention with the positions of the Air Transport Committee. Since no final action had been taken on the subject of insurance by the Council, it was believed that coordination of the insurance problems in the draft convention with the work of the Air Transport Committee should be continued. Therefore, the insurance working group was kept in existence with instructions to take such further action as might be possible in the light of further study of the insurance questions and to report to the meeting of the Legal Committee in January 1951.

DRAFT CONVENTION ON DAMAGE CAUSED BY AIRCRAFT TO THIRD PARTIES ON THE SURFACE AS REVISED BY LEGAL COMMISSION OF FOURTH SESSION ICAO ASSEMBLY *

Editor's Note—The Legal Commission of the Fourth Session of the ICAO Assembly in June at Montreal provisionally revised the Taormina draft revision of the Rome Convention (printed in the Spring issue of the JOURNAL*) and recommended that it be considered at the next session of the Legal Committee in January* 1951. *The revised articles of this most current revision are set forth below.*

CHAPTER I—PRINCIPLES OF LIABILITY

Article 1

(1) Any person who suffers damage on the surface, other than damage due to noise or to passage of aircraft in normal flight, shall be entitled to compensation as provided by this Convention upon proof only that the damage was caused directly by an aircraft in flight or by any person or thing falling therefrom.

(2) For the purpose of this Convention, an aircraft is considered to be in flight from the moment when power is applied for the purpose of actual take-off until the moment when the landing run ends. In the case of an aircraft lighter than air, the expression "in flight" means the period from the moment when it is detached from the surface until it becomes attached thereto.

Article 2

(1) The liability for compensation imposed by Article 1 of this Convention shall attach to the operator of the aircraft.

(2) (a) For the purposes of this Convention the term "operator" shall mean the person who was making use of the aircraft at the time the damage was caused, provided that if control of the navigation of the aircraft was retained by the person from whom the right to make use of the aircraft was derived, that person shall be considered the operator.

(b) A person shall be considered to be making use of an aircraft where he is using it personally or where the aircraft is being used by his servants or agents, whether or not acting within the scope of their authority.

(3) The registered owner of the aircraft shall be deemed to be the operator and shall be liable as such unless, in the proceedings for the determination of liability, he proves that some other person is the operator and, if the law of the court having jurisdiction permits, procures the joinder of such other person in the proceedings.

(4) If the operator making use of the aircraft at the time the damage is caused had not the right to do so for a period of at least six months, the person from whom that right was derived shall be liable jointly and severally with the operator, each of them being bound in accordance with the provisions of this Convention. In any event, the person who suffers damage shall not be entitled to indemnity greater than the highest single indemnity recoverable under Articles 8 and 9 from any of the persons involved. The person who has granted such right shall be relieved of liability in all cases in which the operator is so relieved under the provisions of this Convention.

(5) Neither the operator, the owner, the person held liable under paragraph (4) of this Article, nor their respective servants or agents shall be liable in respect of damage occurring as provided in Article

* Annex "A" of Final Report of Legal Commission of Fourth Assembly, ICAO, Doc. 7015, A4-LE/2, 18/6/50.

1 otherwise than as expressly provided in this Convention, except in the case of such a person who is guilty of an act or omission done with intent to cause damage.

Article 3

If the operator is deprived of the use of the aircraft by act of public authority or if the damage is the direct consequence of armed conflict or civil disturbance, neither the operator nor the owner shall be liable for damage caused in the manner referred to in Article 1.

Article 4

(1) Neither the operator nor the owner shall be liable for damage caused in the manner referred to in Article 1 if he proves that the damage was caused solely through the negligence or other wrongful act or omission of the person who suffers the damage. When the damage is contributed to by the person who suffers the damage, the operator shall be relieved of liability to the extent to which he proves that the damage was contributed by the negligence or other wrongful act or omission of the party who suffers the damage.

(2) The expression "person who suffers the damage," for the purpose of this Article, shall include the servants or agents of such person when acting within the scope of their authority.

Article 5

(1) When, following a collision between two or more aircraft in flight, damage is caused in the manner referred to in Article 1, the operators of the aircraft involved shall be jointly and severally liable (each of them being bound in accordance with the provisions of this Convention) except any operator who proves that his aircraft did not cause the damage in a manner referred to in Article 1.

(2) Where joint and several liability is involved under this article, the person who suffers the damage shall be entitled to be indemnified up to the aggregate of the limits applicable to each of the aircraft involved; but no operator shall be liable for a sum in excess of the limit applicable to his aircraft.

Article 6

(1) A person who, being a servant or agent of an operator, makes use of an aircraft outside the scope of his authority, shall be liable for damage caused in the manner referred to in Article 1 in all cases in which liability for such damage would have attached to the operator in accordance with the provisions of this Convention.

(2) Where a person has made use of an aircraft as mentioned in paragraph 1 of this article or where any other person has made use of an aircraft without the consent of the person entitled to use it, the operator or person entitled to use the aircraft shall not, if he can prove that he has taken proper measures to prevent such use or that it was impossible for him to do so, be liable for damage to which this Convention applies; otherwise he shall be liable jointly and severally with the user, each of them being bound in accordance with the provisions of this Convention, provided that the operator shall not be liable for a sum in excess of the limit applicable to his aircraft under Article 8. In any event, the person who suffers damage shall not be entitled to indemnity greater than the highest single indemnity recoverable under Articles 8 and 9 from any of the persons involved.

Article 7

No change from Taormina draft, see 17 J. AIR L. & C. 194.

CHAPTER II—EXTENT OF LIABILITY

Article 8

No change from Taormina draft, see 17 J. AIR L. & C. 194.[1]

Article 9

No substantive change from Taormina draft, see 17 J. AIR L. & C. 196.[2]

Article 10

No change from Taormina draft, see 17 J. AIR L. & C. 196.

CHAPTER III—SECURITY FOR OPERATOR'S LIABILITY

Article 11

(1) Each Contracting State may require, as a condition of any aircraft registered in the territory of another Contracting State entering its territory, that liability of the operator for damage caused in the manner referred to in Article 1 be guaranteed by insurance up to the limit applicable according to the provisions of paragraph (1) of Article 9.

(2) The insurance shall be accepted by the State to be entered if it conforms to the provisions of this Convention and it has been effected by an insurer, or group of insurers, who is authorized or permitted under the laws of the State where the aircraft is registered to effect such insurance.

(3) Instead of insurance any other security permitted by the State where the aircraft is registered shall be accepted as satisfactory by the State to be entered, if the security conforms to Article 13 of this Convention.

(4) The State to be entered may also require that the aircraft shall carry documentation issued by the appropriate authority of the State where the aircraft is registered certifying that the insurance or other security has been furnished, unless such documentation has been filed with the appropriate authority to be designated by the State to be entered.

(5) Any requirements imposed in accordance with this Article shall be notified to the Secretary General of the International Civil Aviation Organization who shall inform each Contracting State thereof.

Article 12

No change from Taormina draft except deletion in new text of paragraph (1) (d), see 17 J. AIR L. & C. 197.

Article 13

No change from Taormina draft, see 17 J. AIR L. & C. 197.

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[1] Article 8 and Article 9, paras. (1) and (2) were not altered, owing to the fact that the Legal Commission of the Fourth Session of the Assembly, finding that the States required further opportunity to study the consequences of the system of liability created by such Articles, decided to postpone the consideration of these parts of the draft to a later occasion.

[2] See note 1. Paragraph (3) was expanded to read:

(3) if a person (a) uses an aircraft as contemplated by Article 6(1), or (b) uses an aircraft without the consent of the person entitled to use it, or (c) being a person entitled to use an aircraft, uses it contrary to the purposes for which his right to use the aircraft was conferred, his liability shall be unlimited unless he proves that he has acted in good faith, in which case the extent of his liability shall be determined in accordance with Article 8 and paragraphs (1) and (2) of this Article.

CHAPTER IV—RULES OF PROCEDURE AND LIMITATION OF ACTIONS

Article 14

No change from Taormina draft, see 17 J. AIR L. & C. 197.

Article 15

(1) Actions based upon the provisions of this Convention may be brought against the operator, or those representing his estate, and also against the insurer if a direct action may be brought against the insurer in accordance with the law which governs the contract of insurance. Any such action shall be brought before the Courts of the place where the cause of damage in the manner referred to in Article 1 occurred. The operator is deemed to have submitted himself to the jurisdiction of the Court by the mere fact of the aircraft having flown into the airspace over its territorial jurisdiction.

(2) The competent Court shall not proceed to hear the case against the defendant until he has been notified of the proceedings and has had an opportunity to make arrangements for the conduct of his defense. Each Contracting State shall take such measures as may be necessary to establish procedures whereby the defendant and other persons interested may be notified of any proceedings under this Convention and the appropriate documents served upon them.

(3) Each Contracting State shall so far as possible ensure that all claims arising from a single incident and brought in accordance with paragraph 1 of this Article are consolidated for disposal in a single proceeding before the same Court.

(4) Where any final judgment is pronounced by a competent Court in conformity with this Convention, whether in the presence of the parties or in default of appearance, on which execution can be issued according to the procedural law of that Court, the judgment shall also be enforceable in the Contracting State where the judgment debtor is resident or, being a company or other body corporate, has its principal place of business or, if the assets available in that State and in the State where the judgment was pronounced are insufficient to satisfy the judgment, in any other Contracting State where the judgment debtor has assets, upon compliance with the formalities prescribed by the laws of the Contracting State where execution is applied for.

The merits of the case may not be reopened.

(5) The provisions of paragraph (5) of this Article shall not be deemed to require the issue of execution if:

(a) the judgment was given by default and the Court applied to for execution is satisfied that the defendant did not acquire knowledge of the proceedings in sufficient time to act upon it;

(b) the judgment is one which, for reasons of public policy, cannot be recognized by the Court applied to;

(c) the judgment is in respect of a cause of action which had already, as between the same parties, formed the subject of another judgment which is recognized under the law of the Court applied to as final and conclusive;

(d) the judgment has, in the opinion of the Court applied to, been obtained by fraud of any of the parties;

(e) the right to enforce the judgment is not vested in the person by whom the application for execution is made.

(6) Notwithstanding paragraph (4) of this Article, the Court applied to may refuse execution until final judgment has been given on all claims filed within the six months period referred to in Article 14 if

it is evident that judgments exceeding in aggregate the limits of liability prescribed in Articles 8 and 9 might be entered.

(7) Where a judgment is rendered enforceable under this Article, payment of costs recoverable under the judgment shall also be enforceable. Nevertheless the Court applied to for execution may, on the application of the judgment debtor limit the amount of the costs to a sum equal to ——— per cent of the amount for which the judgment is rendered enforceable.

(8) Interest not exceeding ——— per cent per annum may be allowed on the judgment debt.

(9) A judgment to which this Article applies shall only be enforceable within ——— years from the date on which it became final.

(10) This Article also applies to any action against a person liable under the provisions of Article 6.

Article 16

No change from Taormina draft, see 17 J. AIR L. & C. 198.

CHAPTER V—APPLICATION OF THE CONVENTION

Article 17

(1) This Convention applies to the liability of the operator, or user as contemplated in Article 6, of an aircraft registered in one Contracting State, when damage has been caused on the surface to a third party in the territory of another Contracting State, as provided in Article 1.

(2) *"territory of a State"* means not only the metropolitan territory of such State but also all other territories for the foreign relations of which that State is responsible.

(3) For the purpose of this Convention a ship or aircraft on high seas shall be regarded as part of the territory of the State in which it is registered.

Article 18

This Convention does not apply to claims for damage caused to an aircraft in flight, or to persons or goods on board such an aircraft.

Article 19

This Convention shall not apply to damage caused on the surface, compensation for which is governed (a) by a contract of carriage; or (b) by a contract of employment between the person who suffers damage and the person upon whom liability would otherwise fall under the provisions of this Convention; or (c) by statutory provisions governing workmen's employment.

Article 20

This Convention shall not apply to damage caused by aircraft used in military, customs or police services.

CHAPTER VI—GENERAL PROVISIONS

Article 21

If legislative measures are necessary in any Contracting State to give effect to this Convention, the Secretary General of the International Civil Aviation Organization shall be informed forthwith of the measures so taken.

FEDERAL

Department Editor: Charles T. Lloyd*

SEPARATION OF AIR-MAIL PAY FROM SUBSIDY — INTERIM REPORT OF SENATOR EDWIN C. JOHNSON, CHAIRMAN OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, ON MAY 5, 1950

To: Senate Appropriations Committee.

YOU will recall that during the closing week of the last session, the Senate Appropriations Committee expressed grave concern over the failure of the Civil Aeronautics Board to divorce compensatory mail pay from subsidy and indicated an intention to appoint a subcommittee to conduct an immediate investigation of the whole matter.

In my discussion with Senators McKellar, Ferguson, Langer, and Wherry on the floor at that time, I advised you that the Interstate and Foreign Commerce Committee had been studying intensely the administration of the air mail subsidy provisions of the Civil Aeronautics Act of 1938, and that I would report the results of our investigation to you. At that time I said:

> Mr. President, I should like to say that we shall have some very interesting and important information for the Appropriations Committee when we return in January. We have explored the subject at great length and shall continue to do so. We shall have an interesting report for you . . . We are finding out all we can about the operation of our air lines and why it is that the Treasury has to pay out $125,000,000 a year to them. The amount is increasing rapidly. We want to learn to what extent the air lines can operate with only compensatory mail pay . . . Also we are trying to find out how much of the postal pay is compensatory pay, how much of it is subsidy, and why.

Furthermore, the Interstate and Foreign Commerce Committee, the Senate Appropriations Committee, the Post Office Committee, and several committees of the House, have been concerned over the increasing demands for deficiency appropriations to cover higher mail pay authorized by the Civil Aeronautics Board.

The increasing air mail pay to all air carriers in recent years is given in the following tables, on a fiscal and calendar year basis:

	Total mail payments domestic, international, feeder, and Territorial[1]	Average yield per mail ton-mile		
		16 domestic trunk	Feeder	United States international
Fiscal year:				
1946	$44,253,000	$0.55	$17.22	$3.75
1947	55,562,000	.76	38.75	2.81
1948	93,483,000	1.12	41.65	3.11
1949	113,639,000	1.17	28.44	2.69
Calendar year:				
1946	46,201,000	.64	28.16	3.69
1947	72,266,000	.89	41.94	2.75
1948	112,174,000	1.27	32.88	2.98
1949	112,482,000	1.10	29.06	2.66

[1] Mail payments reflect retroactive adjustments resulting from C A B mail rate orders issued and accepted through Mar. 31, 1950.

* Executive Secretariat, Department of State.

BREAK-DOWN OF MAIL PAYMENTS AMONG VARIOUS CAB CLASSES OF CARRIERS FOR EACH FISCAL AND CALENDAR YEAR

	Fiscal year—			
	1946	1947	1948	1949
Domestic trunks	$27,335,000	$23,967,000	$37,713,000	$47,631,000
Feeder lines	1,169,000	3,809,000	9,719,000	12,795,000
United States international	15,227,000	26,858,000	44,708,000	51,426,000
Territorial carriers	61,000	154,000	170,000	227,000
Alaska carriers	461,000	774,000	1,173,000	1,560,000
Total	44,253,000	55,562,000	93,483,000	113,639,000
	Calendar year—			
	1946	1947	1948	1949
Domestic trunks	$21,016,000	$29,123,000	$47,781,000	$45,095,000
Feeder lines	1,692,000	7,027,000	11,902,000	13,769,000
United States territorial	22,685,000	35,084,000	50,895,000	51,546,000
Territorial carriers	122,000	165,000	189,000	248,000
Alaska carriers	686,000	867,000	1,407,000	1,824,000
Total	46,201,000	72,266,000	112,174,000	112,482,000

Included in the 1949 figures are $30,000,000 in retroactive air-mail payments which was awarded the carriers during the year ending September 30, 1949, as applicable to periods prior to this 12-month period. Moreover, these amounts may be increased for each of these years since the CAB has a large backlog of undisposed mail-rate cases applicable to prior years. Petitions of 12 trunk lines, 20 feeder lines and all 12 international carriers are pending which seek substantial mail pay increases for mail already carried.

Mr. Chairman, today I am making the report which I promised you on the floor. It is my hope that it may be of some value to you.

Since the war there has been tremendous advance and expansion in the air-line industry. The increase in plane-miles flown, coupled with the larger capacity of aircraft since 1945 has resulted in a 100-percent increase in revenue passenger-miles flown and in air cargo carried; threefold increase in seat-miles available; and since 1946, the industry has had a 25-percent increase in mail ton-miles. Last year the domestic air lines estimate they carried over 40 percent of all first-class intercity passengers.

Notwithstanding this expansion of the air lines in 1949, the railroads, powerboats, and highway star routes handled 98.6 percent of the ton-miles of all classes of domestic mail. This was done at a cost of 8.9 cents per ton-mile, while the air lines hauled only 1.4 percent of the ton-miles of all domestic mail at an average cost of $1.47 per ton-mile ($1.17 for trunk carriers and $28.44 for feeder lines) or 18.3 percent of the total amount paid all carriers of domestic mail. From the Post Office Ascertainment Report we find that the same surface carriers moved 77.1 percent of domestic first-class mail at a cost averaging 31.4 cents per ton-mile. Ocean vessels receive mail pay on the basis of rates established through the Universal Postal Union. Assuming the average haul of mail to be 4,000 statutory miles for ocean transportation, receipts of these carriers per ton-mile would be 17.75 cents for first-class mail and 2.35 cents for fourth class.

Section 406(a) of the Civil Aeronautics Act of 1938, directs the Civil Aeronautics Board to determine "a fair and reasonable rate" of compensa-

tion to pay the certificated carriers for carrying air mail, but does not specifically require the Board to determine this "fair and reasonable" rate separate and apart from the other elements which the act provides that it shall consider in determining the total Government support. Section 406(b) requires the Board to consider the over-all financial needs of the carrier for Government support. It reads:

> . . . In determining the rate in each case, the Authority shall take into consideration, . . . the need of each such air carrier for compensation for the transportation of mail sufficient to insure the performance of such service, and, together with all other revenue of the carrier, to enable such air carrier under honest, economical, and efficient management, to maintain and continue the development of air transportation to the extent and of the character and quality required for the commerce of the United States, the postal service, and the national defense.

Under this provision the CAB has been making mail payments, including "need" pay, in lump sums to each carrier.

In the fiscal year 1949, the Big Four—American, United, TWA, and Eastern, which carried three-fourths of the total domestic ton-miles of mail—received an average of 71.43 cents per ton-mile. For passengers they received 60.5 cents, 34.7 cents for express, and only 18.9 cents for air freight. Under a controlling CAB minimum cargo rate order the carriers may charge as low as 13½ cents per ton-mile for shipments of freight in excess of 1,000 ton-miles, and very recently the CAB has permitted "directional" minimums as low as 60 percent of the minimum rate. For the smaller trunk carriers and the feeder lines the difference in the average yield from mail and other classes of traffic is as follows:

Fiscal year 1949	Average revenue per ton-mile			
	Mail	Passenger	Express	Freight
		Cents	*Cents*	*Cents*
12 small trunk carriers	$3.16	61.0	33.6	22.8
10 feeder lines	28.44	57.7	37.6	29.8

All of the Government agencies concerned and large segments of the aviation industry have recognized the desirability of finding a new way of paying air lines for the carriage of mail on a compensatory basis and separating the amount of subsidy they must be paid to comply with the direction of Congress in section 406(b) to continue the development of air transportation.

President Truman, in his budget message for 1951, said:

> The recent rise in total air-mail payments—to an estimated level of about $125,000,000 in 1950—has made it increasingly important that the subsidy element be separately identified. I recommend, therefore, the immediate enactment of legislation to authorize the separation of subsidy payments from mail compensation. Such subsidies should be paid from funds appropriated to the Civil Aeronautics Board specifically for that purpose.

Secretary of Commerce Charles Sawyer testified before the House Subcommittee on Transportation on February 15, 1950, as follows:

> A separation of subsidy payment to air carriers and payment for carrying air mail should be made at the earliest possible moment . . . Certain difficulties will be encountered in making studies to ascertain the cost of paying the different types of traffic . . . Congress should decide immediately that subsidies and payments for the transportation of air mail are to be separated and direct the Board to proceed with its cost studies on the basis of that decision.

Mr. J. Weldon Jones, Assistant Director of the Bureau of the Budget, testified before our committee on April 25, 1949:

> . . . a major part of the total cost, the air-line subsidy is buried in mail payment to the carriers, and hence cannot readily be ascertained and evaluated. It would be highly desirable that this subsidy be separated from mail pay as soon as possible . . . I recognize that there are practical difficulties involved in working out this separation. These difficulties may delay the date by which the separation can actually be effected. They need not, however, delay acceptance of the basic principle that such separation is desirable and should be accomplished by the earliest possible date.

Postmaster General Jesse M. Donaldson testified before our committee on June 2, 1949, as follows:

> I have, for the last 4 or 5 years, advocated separating the air mail [pay] and subsidy . . . That would be in the interest of the air carriers. It would be a healthy situation for the carriers themselves, and I am for separating the subsidy.

In spite of the fact that the many witnesses who appeared before our committee endorsed separation of subsidy from air-mail payments in principle, the committee found no basic agreement within the industry or in the Government as to what was meant by air-mail subsidy or who was being subsidized—the letter writer, the passenger, the commodity shipper, the communities served, the Post Office Department, the national security, or the air carrier. It is perhaps significant that Webster's unabridged dictionary, defining "subsidy," gives air-mail payments as an example of what a subsidy really is.

The postwar record suggests mismanagement during the air lines wild and uncontrolled expansion in 1945, 1946, and 1947. From the testimony received by the committee, there is no doubt that the shoe of management inefficiency fitted many air lines during that hectic period. However, the drastic personnel retrenchments and increased operational efficiency by them which has occurred during the past 3 years is proof of what can be done when something must be done. The increased operating efficiency of the 16 domestic trunk carriers is shown by the decreasing cost per available ton-mile from 32.3 cents in 1946 to 29.0 cents in 1949.

In terms of the "need" section of the act, subsidy may be considered the excess portion of mail payment over that required by the act to be paid the carriers as a "fair and reasonable rate of compensation for the transportation of mail by aircraft." This, however, does not tell how to determine the excess, or what the given amount may be. How to proceed to find this "excess" was not clarified either by the CAB or other governmental agencies, as the following excerpts from their testimony will indicate:

Chairman J. J. O'Connell, of the Civil Aeronautics Board, in testifying before the committee, April 13, 1949, said:

> We are not in a position to give an accurate estimate as to the amount of the total air-mail pay bill which represents fair compensation for the carriage of the mail and that portion that represents subsidy. Such a break-down is not required by the act and demand for it has arisen during a time when our staff was struggling to reduce the mail-rate docket.

Chairman J. J. O'Connell, of the CAB, in a letter to me on May 4, 1949, said:

> The difficult and highly technical problems involved in developing methods of expense allocation between mail pay and subsidy make it imperative, in our view, to explore the entire question thoroughly before action is taken in this field.

J. Weldon Jones, Assistant Director, Bureau of the Budget, testified on April 29, 1949:

> As you know, not all of this mail-pay figure can be considered subsidy to the air lines, since part would represent a fair and reasonable payment for the cost of handling the mail. While the break-down between such cost and the subsidy element is not available, it seems reasonably clear that the subsidy is a very large percentage of the total, probably well over one-half.

Jesse Donaldson, Postmaster General, revealed his views as to the question of subsidy when he stated to our committee on June 3, 1949:

> The total cost for both domestic and foreign air mail this year—and when I say "total cost" I mean cost to the carriers—is, in round numbers, about $120,000,000, and by the highest stretch of the imagination you could not presume to state that the subsidy would be more than half of that, if that much.

Again, in testifying before the Transportation Subcommittee of the House, Mr. O'Connell said, on February 15, 1950:

> I do not believe that I need discuss at length the technical difficulties involved in making an equitable separation between mail pay and subsidy. These difficulties have been recognized by a number of independent, impartial groups.

As long ago as March 23, 1949, Chairman O'Connell, in a speech, asserted that the CAB's failure to separate the subsidy element deprived air-line management of normal and needed inducements to operate within the limits of its revenue; i. e., cost-plus mail rates to cover commercial traffic losses deprive air-line management of the fear of bankruptcy and thus the most impelling motive to act with ordinary business acumen.

In view of this recognition of the problem by the Chairman of the expert administrative agency created by Congress in this field, our committee expected foresighted leadership in the solution of the subsidy question. We have been bitterly disappointed. In commenting on S. 2437, which I introduced on August 15, 1949, to require the separation of subsidy from air-mail payments in the domestic field, the CAB made it clear that it could not assist the committee any further in developing the techniques and methods to be employed in effecting the separation of air-mail subsidy. On August 26, 1949, Chairman O'Connell wrote me:

> I do not believe that we would be justified in neglecting these existing obligations [under the Civil Aeronautics Act] for the sake of working on the studies and necessary preparation for amending legislation, except upon a specific congressional directive and with funds appropriated for such purpose.

At one time the Board insisted that it should be given $600,000 supplemental appropriation to make a thorough investigation of the difficult problem.

In the meantime, the staff of the Senate Committee on Interstate and Foreign Commerce has made an intensive analysis of the subsidy separation problem. Also we employed Ernst & Ernst, an outside independent nationally known firm of accountants and management consultants, to provide the committee with an analysis of the standards and techniques that might be used in actually separating subsidy from mail pay and to make a limited pilot survey of the techniques involved in separating subsidy from air-mail pay which would be based upon a limited fixed survey of air-line operations and costs.

Ernst & Ernst gave a great deal of time and consideration to the various problems and submitted to the Committee a most helpful and provocative report as of February 1, 1950. The committee has studied this report

painstakingly and has asked each certificated carrier and interested Government agency to comment on its proposals of separation procedure. However, 3 months have elapsed and the CAB has not responded, and most carriers have declined to give us any expression.

It was understood that Ernst & Ernst, in this pilot study, would not make a precise separation of earned mail pay from subsidy for the entire industry but would develop primarily a program for the committee's consideration at a cost not to exceed $10,000. It was hoped that they could demonstrate the feasibility of their program by applying it to a specific competitive route, such as Washington to Chicago. Unfortunately, Ernst & Ernst insisted this was impractical as it would involve technical cost studies which would have to be made before the program could be applied to any route or station. The Ernst & Ernst report has been helpful, however, in understanding the relationship of the passenger-fare structure to the financially self-sufficient air lines.

In our hearings, time after time an air-line witness emphasized that, if his company were receiving a subsidy, it was due to the number of small cities which it was required to serve under its certificate of public convenience and necessity. Throughout the hearing this theme was sung in unison by the Air Transport Association and by the domestic carriers to justify the failure of the air lines to have achieved self-sufficiency or at least to have realized larger net earnings before mail pay. This argument was used effectively to show why the nonscheduled lines could operate at a profit without subsidy.

In answering Mr. Fishgrund, a spokesman for the irregular carriers who kept emphasizing that the irregulars could offer a new service at low rates which was not being provided by the certificated carriers, Mr. Ramspeck, executive vice president of the Air Transport Association, stated:

> There is no question in anybody's mind but that an air line carrying only long-haul business and serving only a few high-volume points can operate in the black without subsidy . . . Here is a graphic example of the problem which is faced by the common carrier by air. Out of the best 365 stations on the air-line map, 182, or nearly half, do not generate enough revenue to meet the expense of maintaining the stations.

Mr. W. A. Patterson, president of United Air Lines, stated:

> We have estimated that in 1949 our 39 DC-6 airplanes, serving 20 cities will generate 67 percent of our operating revenues and incur 51 percent of our operating expenses on a fully allocated basis.

Mr. Patterson was asked about the following quotation from the address given by him on October 27, 1948, before the Iowa Bankers Association, Des Moines, Iowa:

> For example, we serve 38 small cities on the United Air Lines System. Those 38 cities provide us with 8 percent of our total revenue. However, it is necessary that 40 percent of our mileage be flown to acquire the 8 percent.

The president of Delta Air Lines, Mr. C. E. Woolman, gave additional support to this theme when he stated:

> Senator, I put in this testimony our January experience because I thought it was illustrative of just the basic problem of the industry, that we can operate quite economically between the big centers where the load factors are high, and where you can use efficient, modern equipment. But when you get to serving these many cities that do not justify big equipment, then your costs run up; just as our 6's made us a good profit in the peak of our Florida season, and the DC-4's made us a modest profit, the DC-3's serving the local services lost most of what we made elsewhere, and that is a very serious problem.

Captain Eddie Rickenbacker said:

> For example, out of the 76 cities served by Eastern in 1948, 41 lost money—a total over $450,000. If the effort Eastern spent in these 41 cities had been applied at the other 35 eastern cities, I am certain Eastern's profits would have been doubled what they actually were.

Mr. Six, president of Continental Air Lines, said:

> I think it is significant that 8 of the 27 cities served by Continental account for 80 percent of its passenger revenues. The other 19 average approximately 1 percent each. It is this latter group of cities which require subsidy in order to have the benefits of air service. If they were wiped off the air-line map, I feel confident that the 8 cities producing 80 percent of Continental's business could support themselves.

The concentration of commercial air-line traffic over a relatively few routes between a few large cities has been emphasized time and again in the semiannual CAB air-line traffic surveys. These are based on an actual passenger-ticket count taken in March and September. In the first postwar survey in September 1946, the staff reported to the CAB:

> A lion's share of total domestic air passenger traffic has characteristically been contributed by relatively few stations. As shown in the following table, during September 1946 over one-third of the number of passengers were originated and terminated at 5 stations, representing less than 2 percent of all stations operating. More than two-thirds of the passengers were generated by the leading 25 stations, representing 9 percent of all stations. The concentration was even greater in terms of passenger-miles. The 5 highest ranking stations accounted for two-fifths of the total, and the 25 top stations accounted for almost three-quarters of all domestic air travel. The lowest ranking 125 stations produced only 3 percent of the total.

The latest published survey (September 1948) continues to report that "a relatively great volume of the total air traffic was generated by a small number of stations." Out of 482 cities, I find that almost 50 percent of all the domestic passengers carried during the fiscal year 1949 were enplaned at only 12 cities. These cities are New York, Chicago, Los Angeles, Boston, Detroit, Pittsburgh, San Francisco, Cleveland, Washington, Atlanta, Dallas, and Miami. Out of a total of 13,916,572 revenue passengers carried these cities enplaned 6,881,341.

Although a careful reading of the testimony before the committee reveals some very wide differences within the industry itself, agreement was general that air lines carrying only a long-haul business and servicing only a few high-density points could operate profitably without subsidy; or, to put it another way, that the certificate requirement compelling the air lines to serve a large number of small stations, or to carry predominantly short-haul traffic absorbed most of the profits earned in the long-haul high-density business and was the basic reason why subsidy was required.

The CAB recently acknowledged this as the fundamental nature of air-line subsidy on February 15, 1950, in Chairman O'Connell's testimony before the House Subcommittee on Transportation:

> Although paid to the carriers, this subsidy is not intended to aggrandize their profits; rather, it is paid to them so that they will be financially able to provide service to communities and localities which might not be able commercially, at least at the outset, to support such service or to operate a volume of service which initially may be in excess of the commercial demand for air transportation . . . This suggests the first, and perhaps most fundamental, objective of separating the mail compensation from subsidy, namely, to obtain a measure of the extent of commercial self-sufficiency in our air transportation system and of the various component parts of that system, or conversely to obtain a reasonably accurate judgment of the amount and location of necessary Government support for air-line operations.

A pending proceeding will illustrate the important relation of the community to the self-sufficiency of the individual carrier. Philadelphia is named as one of the western coterminals for the trans-Atlantic operations of the three United States international air lines—Pan American, TWA, and American Overseas. These carriers are desirous of suspending service temporarily from Philadelphia, and the city of Philadelphia has complained to the Civil Aeronautics Board. At a CAB prehearing conference on March 21, 1950, the city of Philadelphia and commercial shippers contended that suspension of trans-Atlantic service from Philadelphia was adverse to the public interest. On the other hand, the carriers contended that "apart from considerations of national interest and national defense, trans-Atlantic service to and from Philadelphia is not economical on the basis of foreseeable traffic potentials." However, the carriers conceded, and this is important, "that if the Federal Government would be willing to underwrite with mail pay, the loss which would be incurred, they would be willing to provide trans-Atlantic service to Philadelphia."

I cite this instance as it is typical of what can occur with respect to a large number of communities now being served by both domestic trunk and feeder carriers. The community has a genuine need for air service and the carrier, which is trying to do an economic and efficient job with as little Government subsidy as possible, sees that demands of this kind will forever preclude it from reaching financial self-sufficiency.

The "need" is clearly not a subsidy to the air line, which is merely rendering a public service for a fair return, but goes to the passengers, shippers, and air-mail patrons of the communities the air line serves. If management economy and efficiency are attained the subsidy rests squarely upon the community whose revenues are insufficient to pay the cost of air-line service.

It is my considered opinion that a just method should and can be devised to pay fair compensation for the carriage of mail, and that all Government support over and above that amount should be charged on the air lines' books to the various communities served as subsidy. As now reported to the Board, about half of air-line expenses may be assigned directly to the communities. Additional expense items may well be similarly assigned. The remaining expenses, including a portion of flight, maintenance, and administrative expenses, should be allocated to the communities on a route or system standard. The manner in which and the extent to which these common expenses are allocated to communities may produce substantial differences in the subsidy to be charged individual communities. Flight expenses, in particular, are associated with route segments, type of aircraft, flight schedules, grounding expenses, and possibly special postal requirements.

Inasmuch as an air line is certificated to render common carrier service to each and every city designated in its certificates of public convenience and necessity, it is believed that, for purposes of assessing Government subsidy to the communities, the air line should be considered as an operating system and each community should be charged some share of all major expense accounts. It is recognized that the sum of the saving in expenses which would result if each community were individually analyzed would not equal the total subsidy required to operate the air line as a going system. But since the air line is operated in its entirety and some amount of subsidy is required, it should be spread fairly to each community served that contributes to the need. The studies made by the committee indicate that the unproductive stations which should properly bear a share of the subsidy is generally over two-thirds and sometimes nearly all of the stations of the entire system.

While our whole air transport system is of undisputed importance to the national defense, Under Secretary of Defense Stephen J. Early reported to

our committee on January 30, 1950, that after months of careful study the Department of Defense considered it impracticable to segregate the dollar amount of subsidy in air-mail pay attributable to national defense, and that even if it could do so, the Department would not be justified in underwriting air-line subsidies alone. I quote from Secretary Early's significant testimony:

> To the extent that these [mail] subsidies assist in keeping commercial air lines in a solvent condition and result in numbers of aircraft in being, they are advantageous from a national defense viewpoint. Of course, we also feel that we have an obligation to keep in mind that the abilities of railroads, bus lines, trucking companies, and the maritime industry are not impaired by virtue of subsidy payments to the air lines . . . The existence of airlift in the commercial air lines, by itself, is a national defense asset, but the payment of subsidies for the continued existence of air lines on the account of national defense is too intangible for us to be able to calculate . . . There is nothing in the Nation's economy that does not contribute to the national defense . . . A war could not be fought without reliance on the fullest capabilities of the railway transportation system in this country. Much the same may be said for the bus lines and the truck lines. The American civil aviation industry is like these other components of the national economy—indispensable to its welfare and, like the others, to its defense . . . We have given this question of dividing subsidies and attempting to fix, in terms of dollars, the amount we think you could justly charge the national defense aspects, and we just plead our incompetency on that point.

This report is limited to domestic air transportation. In the foreign field additional factors become involved—national interest, subsidy policies of foreign governments, security aspects of United States support, and the availability of the negotiated Universal Postal Union mail rate for international air mail. During our hearings, Mr. Juan Trippe, president of Pan American Airways, urged the committee to adopt the UPU rate as the compensatory mail rate to be paid United States flag carriers. This rate represents what the postal authorities are willing to pay air lines of other nations for carrying their mail. It is now $2.86 a ton-mile for intercontinental letter service between gateway ports; $1.43 for shorter European service; and $0.71½ for the carriage of all postal matter other than first class. The payment of these rates to United States flag overseas carriers would have decreased their total United States mail pay by only about $5,000,000 for the year ending September 30, 1949. European postal authorities, against United States opposition, have urged that the present UPU rates be reduced substantially and be related to the passenger fare charges.

While it is clear that the advantages of separating subsidy from air mail pay is equally applicable to the international field and should be made, until further studies can be completed, I am withholding specific recommendations regarding the subsidy policy concerning United States foreign air transportation.

It is my proposal as chairman of the Committee on Interstate and Foreign Commerce, that subsidy for domestic air transportation should be specifically identified and presented to Congress on a community basis.

I recommend, too, that legislation should be passed at this session of Congress, directing the determination by communities of the amount of subsidy required to support the air-line services presently certificated to each community within the United States.

To demonstrate what I recommend, a complete table of air line community subsidies has been prepared to show the Government aid required to support the domestic trunk and feeder line services which each community received during the fiscal year 1949. The table is based upon limited avail-

able public information and was developed by employing allocation standards which seemed most reasonable under the circumstances.

Each community was credited with compensatory mail pay allocated in the ratio of the tons of mail enplaned, employing 100 pounds as the minimum mail load, and 60 cents as the minimum mail ton-mile rate, with a higher rate whenever the ton-mile allocation of joint expenses produced a higher amount. This is a very generous rate; perhaps too generous. Such liberal compensation should insure top priority for the mail. It also recognizes that some of the smaller route patterns certificated by the CAB necessitate higher community operating costs. The difference between the compensatory mail pay and that authorized by the CAB under the "need" section of the act was accepted as the subsidy to be distributed to the communities served on each system. The compensatory rates and resulting subsidy for each carrier are shown in the appendix.

After extended research and consultation with air-line and Government officials, the committee's staff developed a tentative station allocation formula for the distribution of expenses and nonmail revenue properly assignable to the individual communities served. The assistance of each air line in accurately applying this detailed formula to its smaller revenue-producing stations gave the basic information upon which the table was built. As the formula was applied to only the smaller two-thirds of the stations on each system, the staff was unable satisfactorily to allocate all of the subsidy to these stations on some systems. While there has been sharp criticism by the carriers as to the validity of this formula, the spirit manifested by them in preparing the basic data is salutary of their desire to find what communities are actually being served at a loss.

While the amount of subsidy shown by the table for each city cannot be considered accurate to a satisfactory degree, it is believed, nevertheless, that the allocation in the table is sufficiently accurate to justify its inclusion in this report for demonstrative purposes and as a point of departure for further study.

In order to perfect the data to absolute accuracy, a staff of competent engineers and accountants would be required to make field studies and cost analyses of air-line operations. An accurate and detailed analysis, which is required before either the compensatory mail rates for separate routes or systems or the allocation formula of expenses to communities, are promulgated, will be both complex and difficult because of the characteristics of air-line operations and because of the incomplete state of the official accounts presently available. However, if the CAB would revamp its system of CAB Uniform Airline Accounts, and if the matter were pursued year after year, data could be developed which would be dependable to the *n*th degree. Once the reports from the air line were set up properly, it would be relatively simple to maintain and perfect the master plan and keep it perfected with a minimum of effort by the CAB.

The Chairman of the Civil Aeronautics Board in his letter to me of February 14, 1950, estimated that the Board would need $386,000 in addition to the full amount of its regular appropriation as approved by the Bureau of the Budget, to accomplish air mail separation before July 1, 1951. This program would not provide a standard for determining who is being subsidized, nor why, and therefore would only accomplish the first step of the proposal I recommend. It would not achieve the comprehensive finality contemplated by my proposal to you. I repeat, the subsidy "need" is clearly not a subsidy to the air line, which is merely rendering a public service for a fair return, but goes to the passengers, shippers and air-mail patrons of the communities the air line serves.

If the separation of compensatory mail pay and the subsidy were made on the community basis, the committees of Congress, the Bureau of the Budget, and the Civil Aeronautics Board itself, would have a simple dependable and understandable picture of the over-all problem and the domestic air-line program. Such a system would indicate when and where mergers should be made and in what way they should not be made. It would provide a practical yardstick for the extension or abandonment of air-line service.

I believe Congress should insist upon this method of separating the mail pay. If that were done, everyone concerned could quit guessing and start planning for a better air-line service for the United States at a minimum cost. There would be some incentive then for air lines to practice efficient operation. No longer would they be regarded as a subsidy-ridden industry. Whatever subsidy Congress voted would be allocated where it rightfully belongs—to the communities unable to support the air-line service which they receive.

I most earnestly hope that this committee will adopt the method of separation which I suggest.

EDWIN C. JOHNSON, *Chairman.*
Senate Interstate and Foreign
Commerce Committee

SUMMARY OF COMPENSATORY MAIL RATES AND ALLOCATION OF SUBSIDY TO COMMUNITIES USED IN TABLE OF COMMUNITY AIRLINE SUBSIDIES

	Compensatory mail rate per ton-mile used in table	Pounds mail load increased to reach 100-pound-minimum	Compensatory mail pay	Resulting subsidy measured by amount of present CAB mail pay	Portion of subsidy allocated to cities	Number cities to which subsidy distributed	Portion of subsidy not allocated to cities
Airline:							
American	$0.60	.....	$5,531,200	$200,165	$200,165	33	0
Eastern	.60	.....	2,908,266	312,427	312,427	33	0
TWA	.60	.....	5,333,121	1,435,004	1,435,004	34	0
United	.60	.....	6,126,762	1,643,990	1,643,990	35	0
Braniff	.60	.....	616,167	1,701,743	937,735	14	$764,008
Capital	.60	.....	588,023	4,392,392	2,126,566	30	2,265,826
Chicago and Southern	.60	.....	320,854	1,482,470	1,383,665	13	98,805
Colonial	.682	46.8	115,056	1,110,122	1,110,122	12	0
Continental	.674	29.1	196,730	1,186,807	1,109,905	16	76,902
Delta	.60	.....	558,992	1,875,896	1,875,896	23	0
Inland	.601	2.9	71,380	569,108	569,108	9	0
Mid-Continent	.60	22.6	247,762	1,054,200	1,054,200	19	0
National	.619	.....	314,396	1,164,836	1,164,836	19	0
Northeast	.876	48.7	155,050	1,429,122	991,688	17	437,434
Northwest	.60	.....	1,409,853	1,706,290	1,432,069	18	274,221
Western	.614	.....	256,764	1,416,212	625,993	13	790,219
			[1]24,750,296	[1]22,680,784	17,973,369	338	4,707,415
Feeder lines:							
Challenger	1,549	52.2	118,614	952,102	722,365	9	229,737
Empire	1.294	59.0	66,151	581,582	511,245	10	70,337
Monarch	1.623	68.2	139,322	1,103,056	804,404	11	298,652
Piedmont	1.257	76.7	156,931	1,077,564	709,254	13	368,310
Pioneer	.946	53.3	183,327	1,591,149	1,191,706	16	399,443
Southwest	.893	46.5	83,996	1,233,842	965,892	17	267,950
Trans-Texas	2.113	47.7	248,193	1,222,879	906,995	14	315,884
West Coast	1.525	79.4	72,941	743,557	743,557	10	0
Wisconsin Central	3.287	64.3	152,521	637,310	550,409	11	86,901
			[2] 1,221,996	[2] 9,143,041	7,105,827	111	2,037,214
Total trunk and feeder carriers	.....	.....	25,972,282	31,823,825	25,079,196	449	6,744,629

[1] Total mail pay to trunk-line carriers, $47,431,070. Includes C A B orders issued through Sept. 15, 1949, providing retroactive mail revenues.

[2] Total mail pay to feeder air lines above, $10,365,037. Subsidy provisions were not made for such feeder carriers as All American Airways, Bonanza Airlines, Central Airways, Robinson Airlines, Southern Airways, Turner Airlines, and Wiggins, as they were not operating during the entire fiscal year of 1949. Florida Airways was not included, as the Board terminated its certificate. Los Angeles Helicopter Service is not included.

COMPARISON OF PRESENT CAB AIR-MAIL PAYMENTS WITH COMPENSATORY MAIL PAY DETERMINED BY TON-MILE ALLOCATION OF JOINT EXPENSES, FISCAL YEAR 1949

Average for carrier groups	Present CAB[1] mail pay	Rate per ton-mile of present CAB mail pay	Compensatory mail[2] pay by ton-mile allocation	Rate per mail ton-mile of compensatory mail pay by ton-mile allocation
Domestic trunk carriers:				
American	5,731,365	.622	4,119,437	.447
Eastern	3,220,693	.664	2,282,102	.509
TWA	6,768,124	.761	4,217,640	.475
United	7,770,752	.761	4,898,098	.480
Total Big Four trunks	23,490,935	.716	15,517,279	.473
Braniff	2,317,909	2.257	554,281	.540
Capital	4,980,414	5.082	490,969	.501
Delta	2,434,888	2.614	492,659	.529
Northwest	3,116,143	1.326	1,278,249	.544
Chicago & Southern	1,803,323	3.372	228,473	.427
Mid-Continent	1,301,961	4.074	173,524	.543
National	1,479,142	2.914	314,306	.619
Western	1,672,976	3.975	258,392	.614
Colonial	1,225,178	13.611	61,372	.682
Continental	1,383,537	6.722	138,621	.674
Inland	640,487	5.544	69,404	.601
Northeast	1,584,171	17.526	79,207	.876
Total other 12 trunks	23,940,135	3.161	4,139,463	.547
Total 16 trunks	47,431,070	[3]1.175	19,656,742	.487
Feeder lines:				
Challenger	1,070,715	26.793	61,918	1.549
Empire	647,733	30.902	27,122	1.294
Monarch	1,242,377	45.553	44,267	1.623
Piedmont	1,234 495	42.447	36,564	1.257
Pioneer	1,774,475	19.606	85,590	.946
Robinson[4]	442,060	37.415	23,928	2.025
Southwest	1,317,838	23.188	44,938	.893
Trans-Texas	1,471,072	23.938	129,825	2.113
West Coast	816,498	82.885	15,026	1.525
Wisconsin Central	789,830	47.681	54,450	3.287
Total Feeder	10,807,097	30.205	523,635	1.464
Helicopter Mail Carrier:				
L. A. Helicopter	414,470	10.087	412,392	10.285
U. S. International Carriers:				
American (Mexican Service)	152,422	1.324	106,104	.922
American Overseas	3,920,564	2.212	1,287,454	.726
Braniff	1,193,895	82.789	19,361	1.342
Chicago & So. (Caribbean)	1,416,964	148.95	8,784	.923
Colonial	363,601	33.475	9,660	.889
Eastern (Puerto Rican Service)	36,674	.670	20,196	.369
National (Havana Service)	86,542	7.587	6,543	.574
Northwest	5,187,527	2.545	1,523,864	.748
Panagra	3,393,208	10.928	290,602	.936
Pan American System	28,643,997	2.402	8,212,215	.740
TWA	9,226,103	3.110	2,406,776	.811
United (Hawaiian Service)	590,448	.782	317,230	.420
Total International	52,212,035	2.726	14,208,779	.742
Pan American Airways System:				
Alaskan Division	1,302,146	2.832	386,066	.840
Atlantic Division	9,398,020	3.244	3,420,577	1.181
Latin-American Division	3,322,101	1.195	3,324,542	1.196
Pacific Division	12,621,730	2.546	1,081,030	.218
Pan-Am. Airways System Total	26,643,997	2.402	8,212,214	.740

[1] As adjusted by C A B for fiscal year 1949, by rate orders issued through Sept. 15, 1949.
[2] All general expense categories allocated between mail and nonmail services on the basis of relative ton-miles of traffic except "Passenger service," "Traffic and sales," and "Advertising and publicity," which were assigned directly to the nonmail services.
[3] Average.
[4] Began operations Sept. 19, 1948.

AIR-LINE COMMUNITY SUBSIDIES—CITIES SERVED BY TRUNK AND FEEDER AIR LINES SUPPORTED BY FEDERAL MAIL PAY SUBSIDIES DURING FISCAL YEAR 1949

Alabama: Birmingham, $155,000; Dothan, $11,000; Huntsville, $42,000; Mobile, $239,000; Montgomery, $44,000; Muscle Shoals, $3,000; Total: $494,000.

Arizona: Douglas, $8,000; Grand Canyon, $35,000; Prescott, $18,000; Winslow, $101,000; Yuma, $16,000; Total: $178,000.

Arkansas: El Dorado, $64,000; Fort Smith, $86,000; Hot Springs, $54,000; Little Rock, $257,000; Texarkana, $38,000; Total: $499,000.

California: Avalon, $55,000; Bakersfield, $13,000; Burbank, $245,000; Chico, $62,000; Coalinga, $34,000; Crescent City, $35,000; El Centro, $30,000; Fort Bragg, $55,000; Fresno, $26,000; Long Beach, $119,000; Marysville, $66,000; Merced, $47,000; Modesto, $21,000; Oxnard, $71,000; Palm Springs, $8,000; Red Bluff, $90,000; San Jose, $77,000; San Luis Obispo, $46,000; Santa Barbara, $79,000; Santa Cruz, $57,000; Santa Maria, $71,000; Santa Rosa, $64,000; Stockton, $19,000; Ukiah, $55,000; Vallejo, $65,000; Visalia, $32,000; Yreka, $35,000; Total: $1,577,000.

Colorado: Alamosa, $77,000; Canon City, $76,000; Colorado Springs, $300,000; Grand Junction, $113,000; Greeley, $70,000; Gunnison, $58,000; La Junta, $39,000; Monte Vista, $77,000; Montrose, $49,000; Pueblo, $178,000; Total: $1,037,000.

Connecticut: Hartford, $400.

Delaware: Wilmington, $13,300.

Florida: Daytona Beach, $39,000; Fort Myers, $4,000; Key West, $3,000; Lakeland, $34,000; Marianna, $25,000; Orlando, $80,000; Panama City, $10,000; Sarasota, $21,000; Tallahassee, $107,000; Vero Beach, $5,000; West Palm Beach, $156,000; Total: $484,000.

Georgia: Albany, $5,000; Atlanta, $84,000; Augusta, $143,100; Brunswick, $111,000; Columbus, $68,000; Macon, $94,000; Rome, $1,000; Savannah, $287,000; Valdosta, $19,000; Waycross, $4,000; Total: $816,100.

Idaho: Boise, $201,000; Burley, $60,000; Coeur d'Alene, $41,000; Gooding, $62,000; Idaho Falls, $60,000; Pocatello, $99,000; Twin Falls, $7,000; Total: $530,000.

Illinois: Moline, $11,000; Peoria, $90,000; Quincy, $88,000; Springfield, $1,000; Total: $190,000.

Indiana: Evansville, $133,000; Fort Wayne, $196,000; Indianapolis, $5,000; Kokomo, $60,000; Richmond, $85,000; South Bend, $42,000; Terre Haute, $125,000; Total: $646,000.

Iowa: Burlington, $27,000; Cedar Rapids, $34,000; Iowa City, $8,000; Mason City, $58,000; Ottumwa, $54,000; Sioux City, $136,000; Waterloo, $53,000; Total: $370,000.

Kansas: Dodge City, $29,000; Garden City, $31,000; Hutchinson, $199,000; Topeka, $121,000; Wichita, $404,000; Total: $784,000.

Kentucky: Bowling Green, $5,000; Lexington, $194,000; Louisville, $101,000; Paducah, $60,000; Total: $360,000.

Louisiana: Alexandria, $107,000; Baton Rouge, $75,000; Lafayette, $9,000; Lake Charles, $7,000; Monroe, $65,000; New Orleans, $128,000; Total: $391,000.

Maine: Lewiston, $85,000; Augusta, $93,000; Houlton, $75,000; Waterville, $85,000; Total: $338,000.

Maryland: Baltimore, $186,000.

Massachusetts: Hyannis, $39,000; Lawrence, $47,000; Nantucket, $25,000; Oak Bluffs, $65,000; Springfield, $40,000; Worcester, $37,000; Total: $253,000.

Michigan: Battle Creek, $2,000; Jackson, $1,000; Lansing, $44,000; Pellston, $38,000; Sault Ste. Marie, $52,000; Traverse City, $23,000; Total: $160,000.

Minnesota: Brainerd, $22,000; Duluth, $43,000; Rochester, $111,000; St. Cloud, $71,000; Total: $247,000.

Mississippi: Greenwood, $72,000; Gulfport, $9,000; Hattiesburg, $47,000; Jackson, $159,000; Meridian, $109,000; Total: $396,000.

Missouri: Joplin, $87,000; Kansas City, $34,000; St. Joseph, $69,000; Total: $190,000.

Montana: Bozeman, $90,000; Butte, $109,000; Cut Bank, $37,000; Great Falls, $2,000; Helena, $96,000; Kalispell, $3,000; Lewiston, $51,000; Miles City, $52,000; Missoula, $61,000; Total: $501,000.

Nebraska: Alliance, $51,000; Grand Island, $12,000; Lincoln, $161,000; North Platte, $34,000; Scottsbluff, $31,000; Total: $289,000.

Nevada: Boulder City, $46,000; Elko, $60,000; Las Vegas, $235,000; Total: $341,000.

New Hampshire: Concord, $47,000; Keene, $31,000; Portsmouth, $39,000; Total: $117,000.

New Jersey: Atlantic City, $12,000.

New Mexico: Albuquerque, $41,000; Carlsbad, $52,000; Clovis, $160,000; Farmington, $76,000; Gallup, $57,000; Hobbs, $111,000; Las Cruces, $65,000; Las Vegas, $110,000; Roswell, $49,000; Sante Fe, $85,000; Tucumcari, $83,000; Total: $889,000.

New York: Albany, $175,000; Elmira-Corning, $51,000; Glens Falls, $136,000; Malone, $33,000; Massena, $115,000; Niagara Falls, $1,000; Plattsburg, $95,000; Poughkeepsie, $42,000; Saranac Lake, $43,000; Watertown, $72,000; Total: $763,000.

North Carolina: Asheville, $97,000; Charlotte, $47,000; Elizabeth City, $36,000; Goldsboro, $40,000; Greensboro, $164,000; Morehead City, $10,000; New Bern, $19,000; Pinehurst, $47,000; Raleigh, $48,000; Rocky Mount, $26,000; Wilmington, $97,000; Winston-Salem, $132,000; Total: $763,000.

North Dakota: Bismarck, $75,000; Fargo, $103,000; Grand Forks, $57,000; Jamestown, $52,000; Minot, $7,000; Total: $294,000.

Ohio: Akron, $360,000; Cleveland, $173,300; Columbus, $7,000; Dayton, $6,000; Mansfield, $35,000; Springfield, $36,000; Toledo, $317,000; Youngstown, $2,000; Zanesville, $35,000; Total: $971,000.

Oklahoma: Lawton, $50,000; Muskogee, $126,000; Ponca City, $30,000; Tulsa, $5,000; Total: $211,000.

Oregon: Baker, $57,000; Bend, $14,000; Corvallis, $81,000; Eugene, $93,000; Klamath Falls, $5,000; La Grande, $42,000; McMinnville, $89,000; Medford, $37,000; Ontario, $52,000; Pendleton, $149,000; The Dalles, $31,000; Total: $650,000.

Pennsylvania: Allentown, $45,000; Bradford, $42,000; Erie, $12,000; Harrisburg, $148,000; Johnstown, $23,000; Lancaster, $6,000; Philadelphia, $149,000; Pittsburgh, $179,000; Reading, $182,000; Scranton-Wilkes-Barre, $146,200; Williamsport, $91,000; Total: $1,023,200.

Rhode Island: Providence, $59,000.

South Carolina: Anderson, $6,000; Charleston, $151,000; Columbia, $43,000; Florence, $7,000; Greenville, $78,000; Spartanburg, $86,000; Total: $371,000.

South Dakota: Aberdeen, $83,000; Huron, $128,000; Pierre, $58,000; Watertown, $70,000; Total: $339,000.

Tennessee: Bristol, $76,000; Chattanooga, $53,000; Knoxville, $383,000; Memphis, $25,000; Total: $537,000.

Texas: Abilene, $1,000; Amarillo, $257,000; Beaumont-Port Arthur, $80,000; Big Spring, $123,000; Brownsville, $39,000; Brownwood, $73,000; Bryan, $63,000; Del Rio, $57,000; Eagle Pass, $81,000; El Paso, $97,000; Fort Stockton, $105,000; Fort Worth, $645,000; Galveston, $81,000; Harlingen, $42,000; Laredo, $66,000; Longview, $113,000; Lubbock, $66,000; Lufkin, $73,000; McAllen, $38,000; Midland, $118,000; Mineral Wells, $161,000; Palestine, $85,000; Paris, $49,000; Plainview, $58,000; San Angelo, $91,000; Sweetwater, $70,000; Temple, $56,000; Tyler, $130,000; Uvalde, $48,000; Victoria, $71,000; Waco, $136,000; Wichita Falls, $76,000; Total: $3,249,000.

Utah: Cedar City, $47,000; Logan, $46,000; Ogden, $64,000; Price, $60,000; Provo, $64,000; Total: $281,000.

Vermont: Barre-Montpelier, $93,000; Burlington, $107,000; Rutland, $60,000; White River Junction, $68,000; Total: $328,000.

Virginia: Danville, $55,000; Lynchburg, $85,000; Richmond, $138,000; Roanoke, $6,000; Total: $284,000.

Washington: Bellingham, $84,000; Chehalis, $85,000; Everett, $79,000; Hoquiam, $50,000; Mount Vernon, $61,000; Olympia, $129,000; Walla Walla, $83,000; Wenatchee, $72,000; Yakima, $143,000; Total: $786,000.

West Virginia: Charleston, $32,000; Clarksburg, $3,000; Elkins, $2,400; Morgantown, $15,000; Parkersburg, $2,000; Wheeling, $107,000; Total: $161,400.

Wisconsin: Baraboo-Portage, $23,000; Clintonville, $57,000; Eau Claire, $106,000; Green Bay, $38,000; La Crosse, $72,000; Land o' Lakes, $14,000; Madison, $111,000; Milwaukee, $44,000; Racine-Kenosha, $119,000; Rhinelander, $43,000; Stevens Point, $53,000; Total: $680,000.

Wyoming: Cheyenne, $359,000; Greybull, $80,000; Kemmerer, $57,000; Laramie, $97,000; Lovell-Powell, $63,000; Rawlins, $65,000; Rock Springs, $161,000; Sheridan, $93,000; Worland, $61,000; Total: $1,035,000.

Total for all States: $25,074,000.

STATE AND LOCAL

Department Editor: Madeline C. Dinu*

THE PLANNED PROMOTION OF FEEDER AIR TRANSPORTATION

ADDRESS BY JOSH LEE, MEMBER, CIVIL AERONAUTICS BOARD†

THE Civil Aeronautics Act in its Declaration of Policy makes it plain that the duty of the Civil Aeronautics Board is more than that of a referee. The language is clear in requiring *initiative* and *aggressiveness*. It charges the Board with the responsibility for the "encouragement" and "development" and the "promotion" of air transportation. It says that the Board shall "foster" a sound air transportation system. These are dynamic words which place upon the Board the responsibility for leadership in this field. Therefore, it is clearly the statutory duty of the Board to *encourage*, to *develop*, to *promote*, and to *foster* a sound air transportation system, adequate not merely for the present but also for the future.

Pursuant to this mandate, and pursuant to the implications in the Statement of Policy issued by the Civil Aeronautics Board last year, I suggest that *the next logical step in the orderly development of air transportation would be for the Board to announce, as soon as it could be agreed upon, the blueprint for over-all route pattern improvement.* The piecemeal method of route pattern improvement which the Board must employ in order to reduce to manageable proportions the issues involved is a good method *only* when the Board is following an over-all plan. The only way whereby we can avoid a zigzag course of uncertainty is to chart the course in advance. The area method of determining route improvements may lead to haphazard results unless the Board is following a master plan. The announcement of such a blueprint by the Board would define its program and give direction to its efforts.

Now, the first question that arises in carrying out such a program is, *What are the methods whereby the route pattern could be improved?*

One method would be by mergers and acquisitions. There are four distinct advantages which would result from the consolidation of certain of the smaller carriers. They are (1) the elimination of possible uneconomic and harmful competition; (2) a better utilization of equipment; (3) greater convenience to the traveling public; and (4) an improvement of the competitive balance between the carriers. These four advantages would in turn result in substantial savings to the Government.

Unless the Board leads the way in recommending the merging of certain carriers, there are likely to be either no proposals at all for merging or else the wrong proposals. But the Board, because of its objective position, could recommend mergers that would be in the public interest and then assist in providing referees and arbitrators to effectuate agreements between the carriers.

Another means of route pattern improvement would be by the interchange of equipment. This device is in reality a change in the service pattern rather than the route pattern, but it offers an excellent method of improving service, increasing traffic, and generally developing a sound air transportation

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* General Counsel, NASAO.

† Delivered before National Seminar for Feeder Airlines, University of Oklahoma, Norman, Oklahoma, May 25, 1950.

system. We have a number of so-called regional carriers whose routes terminate short of the destinations of many of the passengers. The Board is confronted with the alternatives of (1) either adding more routes to the already saturated air service pattern; or (2) allowing the passengers to be inconvenienced at junction points by having to change from one airline to another; or (3) requiring interchanges of equipment. Obviously, interchange is the preferable of these three alternatives in most cases.

Furthermore, in some cases interchange might well be the first step toward a desirable merger, because by the carriers working together they would constantly be reminded of the possibilities of eliminating overhead costs by merging, and the integration of the two systems would be emphasized by every passenger who bought a ticket to ride beyond the junction point. Here again the initiative of the Board could be helpful, not only in hastening interchange agreements, but in selecting them.

A third means of route pattern improvement would be the complete separation of air service into two distinct categories by the transfer of feeder towns to feeder routes. To this proposition I propose to direct the remainder of my remarks. One of the greatest contributions which the Board could make toward the improvement of domestic air transportation at this stage of its development is to take the initiative in separating more completely the trunk and local services, both of which are required by the public convenience and necessity. There are two questions I wish to ask and answer in this discussion. They are: Is there a need for two types of service? If so, should different carriers provide the different types?

In answer to the first question, there is general agreement that the public convenience and necessity does require two separate types of service. The Board recognized the need for two types of service in 1944 when after an investigation [1] it concluded that it would be in the public interest to authorize local feeder service to the smaller communities. These two types of transportation are described in different terms. For example, as "express" and "milk run" operations, as "long haul" and "local," as "trunk" and "feeder," and occasionally as "primary" and "secondary." But, no matter what they are called, they represent a public need for two distinct types of service.

The most ideal type of service is the nonstop flight between two points. It represents the highest level of convenience to the passenger as well as profit to the carrier. Improvement in air service means that it moves in the direction of the fast nonstop flight.

Already there is a marked difference between the requirements for equipment to perform this type of service and that required to perform the feeder service. As time goes on that difference becomes greater. Two things work constantly toward widening the gap between trunk and feeder service. They are: The increase in traffic and the improvements in equipment. With the ever-increasing volume of long-haul traffic, and the ever-increasing speed and range of planes, nonstop service will be justified between more and more pairs of cities. With the coming of jet-powered planes, the difference between equipment requirements for trunk and feeder service will be immeasurably greater than at present, and it is generally agreed that the need for two different types of service will be correspondingly increased.

On the next question, however—Should the different types of service be provided by different carriers?—there is not the same general agreement. There are those who believe that the trunks should provide all of the necessary air service. For example, they pose the philosophy that the fat should support the lean. They argue that only a few of the intermediate towns now certificated to feeders can justify air service and that they could be better

[1] *Investigation of Local, Feeder, and Pick-up Air Service*, Order Serial No. 2203, Docket 857.

served by the trunks at less cost to the Government. This view is not held generally, but represents the thinking of some people in the air transportation industry. The Civil Aeronautics Board answered this question in the *Rocky Mountain* case [2] when in preference to the already certificated trunk operators it selected for this new type of service two new carriers—Challenger and Monarch. In that decision the Board stated:

> "The type of service we here visualize involves an entirely new type of service gaged to meet the needs of smaller communities and relatively short hauls. In view of the limited traffic potentialities of the points on the new system, an unusual effort will be required to develop the maximum traffic. Greater effort and the exercise of managerial ingenuity may be expected from an independent local operator whose continuation in the air transportation business will be dependent upon the successful development of traffic on the routes and the operation of the service on an adequate and an economic basis."

Adhering to this policy, with some compromises, the Board has certificated altogether 20 feeder carriers throughout the United States, and today 17 of them are operating feeder services over approximately 17,000 miles of routes.

But before the feeder carriers were in existence, and when the DC-3 was the only plane available, the trunks had already been certificated to serve a number of small traffic points on their routes in the different areas of the country. Then, in addition to those traffic points, the Board, through compromises and as experiments, has certificated a number of other feeder towns to the trunks for service, with the result that today every trunk is serving a number of feeder towns in every area of the United States. There is no situation where a clean-cut test of having *all* the feeder towns served by feeder carriers is being made. The different areas represent varying degrees of the separation of the two types of service.

The Board has recognized this situation in certain areas, and undertaken to improve it by instituting proceedings [3] looking toward a more complete separation of these two types of service.

It is this program of completing the separation of feeder from trunk service that I urge as the best contribution which could be made at this time toward the improvement of the domestic air pattern, because: *The transfer of the remaining feeder towns to the feeder routes would make the trunks self-sufficient and separate them from the subsidized service.*

Senator Edwin C. Johnson, Chairman of the Senate Interstate and Foreign Commerce Committee, said [4] that the testimony before his Committee revealed:

> ". . . . that the certificate requirement compelling the air lines to serve a large number of small stations, or to carry predominantly short-haul traffic absorbed most of the profits earned in the long-haul high-density business and was the basic cause why subsidy was required."

Let me explain that my definition of feeder towns would not necessarily include all of the traffic points referred to in these quotations [5] as being served at a loss. I assume that a number of those are marginal towns which would have a chance of becoming profitable traffic points if and when the trunk-line carriers should be relieved of having to serve so many of the purely feeder towns. It is my thought that the Board, in determining the over all route pattern, would make a tentative judgment with respect to the transfer of each town, and that the regular legal procedure would be followed wherein

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[2] *Rocky Mountain States Air Service*, 6 C.A.B. 695, 736, 737 (1946).

[3] *Southwest Renewal-United Suspension* Case, Docket 3718 et al., Order Serial No. E-2680, and *Pioneer Certificate Renewal* Case, Docket 3719, et al., Order Serial No. E-2680.

[4] Interim Report of May 5, 1950, see page 333 *supra*.

[5] Set forth in Interim Report, see pages 338-9 *supra*.

each transfer would be considered on its merits and decided accordingly. No doubt there would be a number of situations where the Board would want to modify its policy because of exceptional circumstances. However, the mere fact that a number of towns are marginal would not detract from the benefits which would result from transferring all of those feeder towns about which there would be no question.

If we are to believe these leaders in the air transportation industry whose testimony I have quoted, we must conclude that by relieving the trunks of the obligation of serving the feeder towns on their routes and by making certain readjustments in their route pattern the Board would make it possible for them to become self-sufficient and carry the mail at a service rate. The subsidized communities would then be separated from the communities which produce enough traffic to pay for the air service which they receive. It would be a distinct advantage to the industry to have all subsidized air transportation segregated in the operations of the feeder carriers. Their certificates are temporary and the legal process of eliminating any unjustifiable service would be simplified.

Furthermore, in having all of the subsidized towns segregated in the feeder systems the taxpayers could better understand where their money goes. People are usually against what they do not understand. As long as the subsidized traffic points are mixed in with the profitable traffic points and served together by the big trunk carriers, it is difficult to know who receives the subsidy. The people are told that it goes for air transportation, but that is so general and indefinite that there is a growing sentiment to cut down on subsidy to airlines. But if the subsidy payments were more closely identified with the communities that actually make subsidies necessary and with the airlines that serve those communities exclusively, then the people could decide if they want that service continued.

Last year rural delivery of mail cost the taxpayers of the United States $152,767,962, but the people would not hear of giving up that service, because they see the mail carrier every day when he delivers the mail to their boxes and they are satisfied that they get value received for that money.

The feeder airline is the air service closest to the people. In the small communities served by the feeders, there grows up an intimate relation between the people and the airline. The children and the storekeepers learn the schedules by heart. On Sundays and holidays people gather at the airport to watch the planes come in and depart. They learn to know the pilots by name and the flights by number. Farmers come to depend upon the air service to bring them parts for their machinery during the rush seasons of their farming.

The people who pay for this service are the ones who should be allowed to say whether they want to keep it. Therefore, by separating into the systems of the local carriers this part of air transportation which still needs subsidizing, it can be understood by the people who pay the taxes, and be appraised by them and their Congressmen for its worth. Congress has requested the Board to make a study separating subsidy from service mail pay. What would be a more practical method of doing that than the one here suggested?

Then again feeder towns should be transferred to feeder routes because more people could be given the type of service they need. It has been argued that an unprofitable town on a trunk would be an unprofitable town on a feeder, but that is not necessarily true because the feeder, due to the short-haul characteristics of its route, can gear its schedules to the needs of the people in the feeder towns who want to go to the big trade centers in the morning and return in the evening; whereas the trunk must provide schedules related to the long-haul needs of its traffic, which seldom coincide with the travel needs of the people in the intermediate towns. Therefore, a feeder

town that is a loss to a trunk whose scheduled plane comes through at 2:00 a. m. might easily become profitable to a feeder—at least less of a liability. Trunks find it difficult to adjust their schedules to the travel needs of feeder towns and at the same time provide convenient hours of departure and arrival for their more profitable long-haul traffic. But feeders have no long-haul traffic to consider. In other words, "What is one man's poison is another man's meat."

Furthermore, feeder carriers can develop more traffic from feeder towns because they give the passengers service to more destinations where they want to go than the trunks since the trunks find it necessary to serve the intermediate points on a skip-stop basis. While it is true that not a great deal of traffic moves between intermediate cities themselves, yet there is some; and this inter-city traffic—small though it may be—could easily be the difference between success and failure of air transportation to the smaller cities.

Furthermore, the feeders are able to provide more frequencies to the smaller communities than the trunks, because in some cases the trunk lines serve alternate legs of a route on different flights, thereby further diluting their service to the small intermediate towns. But the feeders have only the one route, and must serve it with a feeder-type of service. Notwithstanding good management on the part of the trunk operators, they find it necessary to compromise between nonstop service for their long-haul passengers and frequent-stop service for their local passengers, and that compromise, like most compromises, is not satisfactory to either group. The long-haul passengers do not like to have their flights brought down from high altitudes to serve so many intermediate points, and the local passengers in the intermediate cities are not satisfied with the infrequency of the schedules and poor scheduling of flights provided at their airports. This compromise type of service by the trunk-line operator is not calculated to develop the maximum amount of traffic. But the feeder carrier, because of more schedules to each intermediate town at more convenient hours would develop more traffic than the trunks are developing in many of the feeder towns now being served by them.

The appealing argument that a trunk carrier can serve an intermediate town at almost no cost at all "because its planes fly right over our airport" has misled the Board and the carriers more than once. Such an argument does not take into account the fact that the plane may be cruising at a very high altitude, already well loaded with long-haul passengers, or that the company would have to block out a number of seats and lose the revenue from some long-haul passengers in order to accommodate the short-haul passengers. Nor does such an argument take into consideration the fact that the plane may not be stopping at the points where most of the local passengers would want to go. It is equally as misleading to look on a map where a line represents the route of a trunk carrier. It passes right through a little city which is indicated on the map with a heavy black circle as large as the heavy black circles which represent other cities served by that trunk. It seems the most logical thing in the world to believe that this little city which is under consideration can have service practically free. This may have been true to a degree several years ago when the trunks were operating DC-3 equipment on their major runs. But today, with larger and faster aircraft, the trunk-line may not even fly over some of the smaller communities on a great many of its through flights. Thus, the truth is that there are situations where available feeders, due to the fact that their equipment is more adapted to the traffic needs of that little city, and due to the fact that their cruising altitudes are low, can serve that point at less cost than the trunk with larger long-haul equipment. Therefore, by transferring these towns to the feeders, both the trunks and the feeders will benefit by the transfer.

The feeder towns should be transferred to the feeder routes because the feeder carrier has a greater incentive than the trunks to develop the local short-haul business. There exists the same difference in incentive between the trunk and the feeder as between the dog and the hare in the fable. The dog when asked why he failed to catch the hare said, "I was running for only a meal, but the hare was running for its life." The trunks not only make more profit out of the long-haul operations, but in most cases serve the intermediate points at a loss. Therefore, it is only acting like businessmen for the management of the trunk lines to place greater emphasis upon the development of the long-haul traffic than upon the short-haul traffic. In fact, it is not unreasonable to assume that many of the small intermediate points are receiving no more than a bare minimum of service. Such an assumption is not based upon a doubt of the good faith of the trunk operators, but upon the normal behavior of business management.

The feeder carriers, on the other hand, are serving the feeder towns zealously. They have no profitable long-haul business to develop, but like the hare, have their business lives at stake. They must live or die as a result of the business they can generate from local short-haul traffic. Because of this strong incentive of self-preservation, the management of the feeder carriers has gone into the small communities with traffic-development campaigns of great intensity which have produced noticeable results. The "Use it or lose it" slogan of the feeders has been effective in increasing air mail poundage as well as passenger load factors. On the question of incentive, there can be little doubt where the interests of the trunk carriers have been since almost all of their technological improvements have been in the direction of long-haul equipment.

The feeder towns should be transferred to feeder routes because that would make possible the extension of air service to more people. In a few areas there are, no doubt, some scattered towns, not quite large enough for trunk service but which could be enjoying feeder service if the other feeder towns in that territory were transferred from the trunks and thereby made available to complete a feeder system. Furthermore, it is doubtful whether a number of feeder companies will be able to justify the continuation of their existence unless some feeder towns now being served by trunks are transferred to their routes in order to make their systems more complete.

If their systems are not made more adequate and their certificates are allowed to expire, the trunks will then be stuck with a number of feeder towns which they must continue to serve at a loss, and the other communities not now being served by the trunks will be left without air service at all. This situation could be avoided by a proper rearrangement of the route structures of both types of carriers to the advantage of both in a manner that would make their operations more profitable and more serviceable to more people.

The policy of separating the two types of service and having them provided by different carriers takes air transportation to more people, whereas the policy of having one carrier serve all of the trunk towns and the best of the feeder towns but not all of them, moves in the direction of keeping air service from communities which could be enjoying it. If we allow these feeders to fail for the want of slight route readjustments and become satisfied with providing air transportation only between those cities that are presently able to support it, with no program for extending it to other communities, then we will not, in my judgment, be fostering and promoting air transportation. If we limit ourselves to only those people already using air transportation, with no plan for penetrating the great majority who have never used it, we will be selling ourselves short. On the other hand, if we project air transportation into all communities which have a reasonable chance of developing enough traffic to justify the service, we will then be

accelerating the progress of air transportation. The foundation of air transportation is the number of people who are willing to patronize it and, in order to build a great air transportation business, it is essential that we rest it on the broad base of an air-minded public—not only in the big cities but in the smaller cities as well. The feeder airlines are today taking air service to the grass roots and thereby broadening the base of the traffic potential of the future. Therefore, this program of feeder airline improvement means air service for more people.

Could the Transfer of Feeder Towns to Feeder Routes be Accomplished?

The next question is, Could such a program as I have outlined be accomplished? I believe it could. The transfer of feeder towns to feeder routes is so mutually beneficial to all concerned that I would anticipate considerable help from the communities and the carriers, particularly when the entire plan would be known. That is where the announcement of an over-all plan by the Board would be useful. Not only would it help sell the idea; but it would be the means of coordinating the efforts of all interested parties.

State Aviation Commissions would, I am sure, cooperate with the Board in working out a route pattern in each state. Their first-hand familiarity with the traffic needs of their own states could be valuable in determining which towns could be better served by the feeders than by the trunks. Maps showing their recommendations sent in beforehand would be very helpful to the Board in making its tentative judgment with respect to the pattern to be announced. These State Commissions could help secure the cooperation of the communities within their several states. I am sure that a thorough understanding of the complete plan by the communities would result in a cooperative effort by all concerned.

The trunks would have no less reason than the feeders to give enthusiastic support to a plan that would give them a chance to get rid of their weakest traffic points, and thereby improve their service, unless some of them still have apprehensions that the feeders may be allowed to evolve into trunks. Most of them, however, are today relying upon the Board's assurances that it has no intention of allowing feeder carriers to expand their services into trunk-line operations. As recently as November 10, 1949, in the *Bonanza-TWA Route Transfer* case [6] the Board specifically pointed out:

> "We would like to emphasize again that we have neither the disposition nor the intention to permit local air carriers to metamorphose into trunk-lines competitive with the permanently certificated trunk-lines. The local service carriers were certificated by us as an experimental effort to bring useful air transportation services into the smaller communities and the isolated or sparsely populated areas of this country and to feed connecting traffic to long-haul carriers. We recognize that some competition between local service carriers and trunk-line carriers is inevitable but we intend not only to minimize such competition but to prevent its development to the greatest feasible extent."

It should also be noted that the certificate which was issued to Bonanza Airlines was a special feeder certificate authorizing that carrier to engage in "local air transportation service." Furthermore, the Board at that same time agreed upon the policy of inserting such language in all feeder certificates hereafter issued, in order to distinguish them from the certificates of trunk-line carriers.

Since the Board's strong statement of policy in the *Bonanza* case, together with other clear indications that the Board intends to hold the line and keep feeders from competing with trunks, many of the trunk carriers

[6] *Bonanza Airlines, Inc.—TWA Route Transfer* case, Docket 4053.

have already, upon their own initiative, moved for the separation of feeder towns from trunk routes. Northwest has asked to be relieved from serving Green Bay, Wausau, Eau Claire, and Beloit-Janesville, Wis.; American has asked to suspend service at Abilene and Big Spring, Texas; and TWA, in addition to its willingness to turn over to Bonanza its local routes between Las Vegas, Boulder City, Kingman, Prescott, and Phoenix, asked that it not be required to provide service to Findlay, Springfield, and Lima, Ohio, and Richmond, Indiana. Furthermore, the Board itself has taken the initiative and issued show-cause orders to determine whether certain other of the smaller cities in California, Washington, Oregon, New Mexico, and Texas, should be transferred from the trunk-line routes to feeder systems.[7] Therefore, it appears that the Board could expect cooperation from the trunk lines in transferring feeder towns to feeder carriers, particularly if the Board should adopt an over-all route pattern so the trunks would know what the Board has in mind.

Record of Feeder Airlines

Next, I would like to direct attention to the record of the feeder airlines in order to determine whether they have justified their existence up to this point. Before an experiment is worth anything it must be given a fair chance. No one knows how many experiments have failed because they were approached with mincing steps and half measures, but it is known that many experiments which have resulted in great progress would have failed and been discarded if those who were making them had not had the courage and patience to see that the conditions surrounding the tests were favorable to their success.

In the case of the feeder-line experiment, the carriers have been operating under three handicaps. These handicaps are considerable and must be taken into consideration in any fair appraisal of the results. Furthermore, unless they are removed, the results will be inconclusive. These three handicaps to which I refer are: (1) Poorly adapted equipment; (2) short-term certificates; and (3) inadequate route patterns.

With respect to the first handicap; namely, the need for a feeder-type plane, the manufacturers have not felt that the potential market for such a plane has been sufficient to justify the expense necessary to develop it. The Board, however, has in the past indicated to Congress its approval of legislation looking toward the development of a plane especially adapted to the feeder type of service. The possibility that enough savings can be effected in the operation of feeder equipment to materially affect the total results has been questioned, but let me point out that the feeders in one year operated approximately 22 million plane miles with DC-3 aircraft and the saving of only one cent per mile would amount to $220,612. Therefore, I do not discount the possibility of substantial improvements in this direction.

The feeder carriers themselves, at their own expense and as a result of their own ingenuity have made considerable progress in adapting the DC-3 to the feeder service, with the result that today most of them are using it. While it is not the complete answer to their needs, it is being used to serve feeder routes with a fair amount of success.

With respect to the other two handicaps, the Board alone has the power to remove them. I refer to the short-term certificates and the inadequate route patterns. Already the Board has renewed some of the feeder certificates and has in process cases for considering the renewal of others. While this will extend the life of these certificates, it will not and cannot make up to the carriers the difficulties of financing with the resulting delays and losses which

[7] See footnote 3, *supra*.

their certificates limited as they were to only three years instead of five have already caused them. The main part of the damage caused by the short-term certificates has already been done but it should be borne in mind, in appraising the accomplishment of the carriers, that an allowance should be made for the difficulties which they have surmounted in financing the purchase of equipment and in keeping their planes in the air.

It is with respect to the third handicap, however, that the Board can make its greatest contribution toward a successful test on the feeder experiment. The Board is likewise studying this problem with that very purpose in view. When we read the history of the expansion of the railroads across the continent and realize that it was accomplished only by courage and faith on the part of those responsible for Government aid, as well as those pioneering railroaders who invested great sums of money in the construction of railroad beds, including expensive trestles, bridges, and tunnels, it should make relatively easy the willingness to grant an airline a route through the air which involves no outlay of money for a road bed, and which if not successful will automatically terminate within a short period.

While we are thinking of the problems which confronted the railroads I believe it would be interesting to quote a few words which I found in the minority report of Congressman Kidwell of Virginia, made in 1856 on the *impracticability of constructing a railroad from the Mississippi River to the Pacific Ocean.* In that report he said:

> "Who expects a population of half a million souls, including men, women, and children, to supply business enough to support three railroads, each 2,000 miles long, running over mountains covered with snow and across deserts of sand? . . . . To properly support that hydra-headed road alone, the united support of the entire industrial interests of the whole British Empire would prove utterly inadequate . . . ."[8]

No doubt there were many others besides Congressman Kidwell who wondered where the traffic would come from to support one railroad, much less three, all the way across the United States.

It is evident from the record that the feeders which are showing the best results are those with the most nearly adequate route patterns. *My idea of an adequate feeder route, is one that originates at a good traffic center and proceeds in a reasonably straight direction to another good trade center, serving a number of smaller communities as intermediate points thus connecting the several intermediate communities with their trade centers in such a manner that there will be a strong traffic pull at each end of the route which grows progressively weaker toward the middle.* Such an arrangement as I have in mind contemplates that virtually all of the terminal-to-terminal traffic would be carried by the trunk or trunks certificated between those two points. But the two strong terminals would have sufficient community of interest with the intermediate towns served by the feeder as to make it possible to develop respectable loads in both directions from the local traffic. But without a strong traffic pull at both ends of a route, there is not much possibility of developing enough traffic to justify the existence of the carrier.

There are other carriers with inadequate route structures, who, although they have reduced their costs to a level fully as low—and in some cases even lower than those attained by the more successful feeder operators —or I should say more fortunate ones, have been unable to build up respectable load factors, not because of any lack of zeal or efficiency on their part, but because their route patterns are inadequate. In most cases the inadequacy has been the lack of logical terminals to their routes. However,

[8] Minority Report of Congressman Kidwell, House Report 274, 34th Congress, 1st Session, July 24, 1856, pp. 30 and 41.

there are some cases where the feeder's routes are inadequate because there are not enough feeder towns on them since some of the feeder towns in their territory were already being served by the trunks when they were certificated.

But in spite of these three heavy handicaps and many other difficulties incident to the initiation of new service, the feeder carriers have made a creditable record. I shall discuss the record of the following twelve carriers: All American, Challenger, Empire, Monarch, Piedmont, Pioneer, Robinson, Southern, Southwest, Trans-Texas, West-Coast and Wisconsin Central.

These twelve feeder operators provide small communities with air transportation to their trade centers in every section of the country. The amount of temporary mail pay received by them for the twelve months ending September 30, 1949, was $12,945,000. While this amount is substantial, I think it worth while to bear in mind that the initial stages of any experiment always entails many costs of a *non-recurring nature.* Furthermore, it should be borne in mind that these carriers have, without exception, been able to reduce the *recurring* costs consistently and continuously. It should also be borne in mind that they have consistently increased the non-mail revenues.

Now let us see what the public has received in return for this mail pay of $12,945,000. These small airlines carried in one year a total of 3,179,525 pounds of mail. That means, when translated into pieces of mail, that these twelve carriers in one year carried over 60,000,000 letters or other pieces of first-class mail. If we figure 6 cents for each piece of mail, we would arrive at a figure of $3,624,658 which was paid to the Government for carrying and handling that mail. While the expense of collecting and delivering must be taken into account, and while allowance should be made for the fact that other carriers participated in carrying a part of this mail, and no doubt on a mileage allocation basis the trunks would be entitled to most of the credit, yet it must be remembered that much of this mail would not have moved by air if the feeders had not served the communities where it originated or terminated, and the fact remains that over $3½ million was paid into the Treasury of the United States for the mail carried by these twelve feeder carriers.

Now, if instead of figuring 6 cents a letter, we should figure 21½ cents a letter the amount would cover the entire mail-pay bill for these twelve carriers. And 21½ cents is not an unreasonable charge for carrying a piece of mail by a pioneering method of transportation. People paid considerably more than that for mail carried by the Pony Express. That is a much fairer way of looking at the mail-pay than to divide it by the number of passengers thereby implying that the resulting figure is a subsidy from which no one benefits except those passengers.

Not only did these feeders carry 60 million letters in one year, but they also carried nearly 6 million pounds of cargo. That is—express and freight. Most of this cargo consisted of small important items, in some cases emergency items to which the time saving through air transportation is of so great a benefit as to make it difficult to estimate its value in dollars and cents.

Furthermore, these twelve little airlines are serving a total of 322 cities, representing a population of more than 41 million people. But of greater significance than the total population is the fact that in the smaller intermediate towns on these feeder routes there are 1¼ million people who are being given air service for the first time.

Then again, these twelve airlines have activated and are serving a total of 129 airports which would not otherwise be served. It is difficult to estimate the value to the United States in national defense of having 129 airports kept in operation instead of being allowed to grow up in weeds, particularly when it is realized that many of these airports were built at great

expense by the Government during the war. Furthermore, as a result of these feeder operations, a total of 64 airports have been enlarged. That means 64 more airports have been made available for larger equipment. This too adds substantially to the transportation and distribution facilities of the nation, all of which contribute to a state of national preparedness. Furthermore, as a result of these feeder operations, a total of 92 airports have been provided with night lighting facilities. These 92 airports which can be served at night increase our national defense.

Furthermore, approximately 9,000 miles of new airways have been established for the operation of these feeder routes, and much of this new airway mileage has been established by the airlines themselves, thereby accounting for some of the non-recurring costs referred to above and further increasing our national security. Furthermore, a total of 76 "H" facilities have been installed. Here again the carriers themselves have participated at their own expense to a substantial extent in the establishment of these facilities; and here again we have another example of non-recurring costs as well as 76 steps forward in air safety and national defense.

Furthermore, these twelve feeders employ 3,000 people, of which approximately 2,000 are former service men and women. Approximately 16 per cent of these employees are pilots or a total of 480. I am advised that the National Defense Department spends approximately $2,100 to give a reserve pilot two months training. Although that training is very intensive, yet no one would seriously contend that a pilot with only two months training would be as well prepared as one of these airline pilots who is kept in constant practice. But in order to be conservative, let us assume that if the National Defense Department should give the reserve pilots six months a year training, they would then be as well prepared as these airline pilots. On that basis, it would cost the Government $3,024,000 to keep 480 pilots up to as high a level of training as the 480 pilots who operate these feeder routes. Approximately 22 per cent of the 3,000 employees are mechanics, and 15 per cent are other technical personnel, I am advised that it costs the Defense Department $1,110 to give a mechanic two months training a year. On that basis, it would cost the Government $3,330,000 to keep 1,110 mechanics and other technical personnel as well trained as the 1,110 who work for these airlines. Adding those figures together, the cost to the Government for the training provided by these feeder airlines for 480 pilots and 1,110 mechanics and technical personnel would be 6½ million dollars. Now bear in mind that this takes into consideration only 53 per cent of the employees of these feeder carriers, and obviously the training provided by these carriers for the other 47 per cent, which includes traffic men and the operations personnel, would all, in case of war, be of considerable value to the Government in setting up another Military Air Transport Service such as that organized during the last war.

Furthermore, these 12 carriers are today operating a total of 84 aircraft an average of approximately 24 million miles a year. Seventy-eight of these are DC-3's and 6 are Lockheed Electras. That represents approximately half the number of transport planes turned over to the Air Force by the airlines at the beginning of World War II which, with such military and naval planes as were available, became the nucleus around which General Harold E. George built the Air Transport Command.

Furthermore, these 12 feeder lines carried in one year a total of 624,660 passengers which represents $6,900,000 in passenger revenues. By dividing their total mail pay bill of $12,945,000 by the 624,000 passengers carried by them, the result would be a figure of $20.72. Now instead of saying as some have that for every passenger carried by these feeder airlines, Uncle Sam paid a subsidy of $20.72, it would be fairer to say that these 624,000 passengers contributed $6,900,000 toward our national defense, because every

dollar of non-mail revenue which these carriers receive reduces the amount which the Government must pay in order to have available as the backlog of national defense 84 operating transport planes, 129 activated instead of closed down airports, 64 enlarged airports, 94 lighted instead of dark airports, 9,000 miles of new airways, 76 new "H" facilities, and 3,000 trained up-to-the-minute additional personnel.

To what extent the feeder operations have resulted in encouraging air travel over the trunks is not known, and would be very difficult to determine; however, it is reasonable to believe that where a passenger could make his entire journey by air because of the feeders which provide a convenient connecting service with the trunks, the chances of his making the journey by air would be much greater than if he had to make part of his journey by surface transportation, either at the beginning of the trip or at its termination.

These feeders have in one year received from the trunks and carried to their final destination 154,536 passengers. Unquestionably, some of these 154,000 passengers were influenced to travel by air because of the added convenience of their feeder service.

Furthermore, these carriers, true to their name as "Feeders" did in one year deliver to the trunks 100,344 passengers. This means that in one year, a total of 254,880 passengers either began or completed their journey on these feeders. Obviously, these would be mostly long-haul passengers because for a short trip a passenger would not likely go to the trouble of changing planes and carriers. It is also more than likely that of the majority of these passengers, the trunks received the larger share of the fare and, therefore, estimating the figure of $40 as the trunk lines' share of the ticket we would have a figure of approximately 10 million dollars which would be the trunks' share of these joint passengers. That, I submit, is a very respectable figure, and no one would argue that the added convenience of being able to complete their journey by air due to the services provided by the feeders did not contribute substantially to producing that revenue.

These twelve feeder carriers have made many contributions to the fast developing industry of aviation, contributions which may not have been made for many years if we had depended upon the trunkline operators to make them. But fortunately, the Board entrusted the development of this short-haul business to small independent carriers instead of to the trunk line carriers. It was felt that the trunks would be giving their attention to the more profitable part of their business—the long haul, and would not devote the intensive effort to the development of the short-haul business that it required. Time has proved that decision to be good. The *oneness of purpose* of these feeder carriers is responsible for the impressive list of contributions which in a comparatively short period of time they have made to this industry.

One of the important contributions which the feeder carriers have made to the aircraft industry generally, and which has had a wide-spread influence on operators of DC-3 equipment, both trunk and feeder, has been a flight equipment conversion plan which has improved the interior arrangement of the DC-3 aircraft and has made it more suitable for airline use, especially for short-haul service. This plan has eliminated the costly time and manpower consuming use of a multitude of mobile ramp vehicles and has reduced loading time from the usual 15 minutes required with a conventional DC-3 plane to two minutes. By shifting the cargo space to the back of the plane, substantial economies have been effected in loading costs. By installing a stairway passenger door which is operated by the cabin attendant and self-service baggage racks, the loading and deplaning of

passengers have been greatly expedited and the services of a number of ground personnel dispensed with.

An important contribution of the air carriers is the use of carrier personnel to make weather observations. For example, Southwest has 27 stations on its system, only ten of which are served by the Weather Bureau's Airways Service. At the remaining stations this carrier's personnel make weather observations every hour from 6:00 a.m. until departure of its last flight. This amounts to more than two hundred observations daily. The information is collected in sequence by means of a private teletype system. In addition to serving the company's operations, the weather information is furnished to the Weather Bureau for distribution in regular sequence reports. Based upon the Weather Bureau's pay scale of as much as $1.00 per observation to individuals for similar observations at points where there are no regular weather stations, this represents a contribution of $200 per day by this carrier to aviation generally. During a two week survey made by Southwest, direct requests for weather information at this carrier's stations exceeded 500, or an average of 36 per day. These requests included such agencies and individuals as Army Air Force pilots, Navy Air Transport Service, Civil Aeronautics Administration Control Towers, Forest Service pilots, scheduled air carriers, airport managers, flying schools and private pilots. All feeder carriers are rendering a similar service in various sections of the country.

Southwest operates a route which crosses large areas of valuable timber land. This carrier has worked out fire reporting procedures with U. S. Forestry division supervisors wherein fire reports are relayed by radio from flight crews to the carrier's ground stations and thence via telephone to the nearest Forest Service Station. In one National Forest alone the supervisor has estimated that millions of dollars worth of timber have been saved by this carrier's fire reports and that during the fall of 1949 in which there were a series of fire outbreaks, this carrier spotted 17 unreported fires within a 24 hour period.

Southwest developed the operating procedures and pilot training program for the first commercial all weather operation at Arcata, California. This operation utilized FIDO, GCA, High Intensity Lights, and ILS. This carrier's use of these facilities marked the first time a scheduled air carrier used manufactured weather in regular operations. The information and experience gained from this operation has been of material value to the aviation industry, military and civilian. This carrier has recently developed procedures utilizing High Intensity Lights as a prime landing aid, and has been approved for minimums of 100 feet and one-quarter mile, the lowest minimums approved for any certificated carrier.

The feeder carriers have made important developments relating to communications. One of these is the development of an integral radio junction box which eliminates much of the time necessary for radio technicians to be in the cockpit, thus decreasing the time required for aircraft radio maintenance.

The feeders have developed a packaged ground station unit containing power supply, transmitter and receiver. Instead of having technicians touring the system, these units are forwarded to the radio shops for service when they become defective. Spare replacement units are then shipped to the station having radio trouble, thus putting the station back in operation in a minimum of time and eliminating the costly item of traveling expenses heretofore required to have roving radio technicians constantly touring the system in order to repair and check station radio equipment.

An important development by Piedmont is an ILS test set with a single unit instead of three test units previously used and which required three

technicians at the same time to make the test. This single unit incorporates both the glide path and the localizer test set, and requires only two technicians to complete the necessary daily checks.

Piedmont has contributed substantially to the development of a new type of DC-3 engine priming system. The earlier system utilized numerous small brass lines running to several different cylinders, these lines being in the fire zones of the engines and creating a constant fire hazard. This carrier's new system requires only two lines, neither of which goes to the cylinders. Instead, the prime is put directly into the induction blower of the engine. In addition to being considerably safer, the new method effects substantial savings in installation and maintenance expense. This development has been of sufficient importance that Pratt & Whitney has issued a service bulletin setting forth the method developed by Piedmont for making the change.

Practically every one of the feeder carriers has made some contribution to the air transportation industry. Among these are procedures, methods, and devices for easing the inspection, maintenance, technical, and operating burden, which have been important items of expense. In addition, refinements in the accounting and stock inventories, and the introduction of multiple activities for personnel have streamlined these feeder companies into highly efficient units of our air transportation network. These are just a few of the contributions which the feeder carriers have made to the air transportation industry. There are, of course, many others which I will not go into at this time.

This program which I have outlined would require the cooperation of all parties concerned in order to achieve the fullest benefits. The key to achieving it, of course, would be an over-all route pattern. There may be those who would hesitate to give their support to such an effort because they fear that it is not feasible since it strives for too great a degree of perfection.

I do not subscribe to such a defeatist attitude; neither do I subscribe to that other defeatist attitude which is that *we should not do anything because we cannot do everything.* I realize that the Board might not succeed in securing all of the route improvements which it would recommend, but even so, I believe we should set up the ideal route pattern as our goal and strive to achieve as much of it as possible.

NASAO ACTIVITIES

INTER-RELATIONSHIP between international, federal and state activities in aviation matters and the resultant impact upon concepts of law and procedure has been brought to the forefront in recent months. The Taormina redraft of the Rome Convention on Damages to Third Persons and Property on the Ground,—H.R. 8126 introduced by Congressman McGuire of Connecticut on April 20, 1950 in the Congress proposing to require proof of financial responsibility from all aircraft owners and operators,—and efforts on the part of the state aviation directors members of the NASAO to secure elimination from state laws of 13 states of "absolute liability" for aircraft owners and operators, indicate the more or less interdependence of processes at work.

Possibilitity of Divergent Federal and State Liability Theories

If the trend of the thinking expressed during work on the redraft of the Rome Convention should result in compromise on the part of the United States to accept the "absolute liability" theory, then we have a change in

the basis of liability in general practice in the states, by process of international agreement. While there may be given the argument that such compromise is justified in order to have an international agreement adhered to by the member nations of ICAO, and that it would cover only international flights, there yet remains the unalterable fact that we would have an absolute liability theory at the federal level and a divergent theory at the local level.

An interesting and novel approach to the evidently preponderant thinking of the Air Coordinating Committee membership respecting the Taormina redraft of the Rome Convention was made by Leander I. Shelley, General Counsel of The Port of New York Authority in an address before the annual meeting of the Airport Operators Council at Cleveland on April 25, 1950. His Address was entitled "Legal Matters Involving Questions of Policy for Airport Operators," and reads in part as follows:

> "The second question which will arise in Montreal is whether they should indicate a willingness to approve the proposed treaty in substantially its present form, and nothing more. This question I believe should clearly be answered in the negative. If exonerating foreign aircraft operators from their obligation to pay in full all damages caused by their wrongful acts is justifiable, it must be because of considerations of nationwide importance. Under such circumstances *the loss should not be imposed upon the innocent persons who suffered the actual damage, but should be borne by the Nation as a whole since the agreement is made for the benefit of the entire Nation.* (Italics by writer.)
>
> "This raises the third question, which is, assuming the desirability of the treaty because of controlling reasons of national policy, can it be entered into without imposing an unjust burden upon innocent persons suffering damage. To my mind this result can be accomplished. If for the benefit of the nation as a whole, it is desirable to limit the amounts which may be recovered from foreign aircraft operators, then it necessarily follows that the nation as a whole should foot the bill and that Congress should ratify the treaty *only if at the same time it adopts a statute placing the duty upon the federal government to pay any excess of the just claims of residents and citizens of this country over and above the amount which might be collected from the foreign airline under the treaty.* . . .
>
> "The problem of protecting United States flag aircraft, against what has been called 'catastrophic risks abroad', (absolute liability with certain high limitations) might also be solved if in lieu of ratifying the proposed treaty, our government undertook to insure our airlines against such risks by insurance analogous to war risk insurance at reasonable rates. . . ."

The distinguished General Counsel for The Port of New York Authority, as so many other persons in federal policy-making posts, concentrate their attentions upon the scheduled airlines and their needs, and fail to take into consideration the increasing non-airline air transportation of private and industrial aircraft. The intent of the international agreements is to cover all aircraft since the definition of terms for "aircraft operator" or "operator of aircraft" covers all aircraft owners or operators of a signatory Nation, and not only the certificated scheduled carriers.

Federal Requirement of Financial Responsibility

H.R. 8126 proposes to amend the Civil Aeronauticcs Act of 1938 empowering the Civil Aeronautics Board to require proof of financial responsibility as a condition precedent to operation of aircraft in air commerce. The Board is to make rules and regulations in the subject and there are no limitations nor other guiding criteria in the Bill, nor standards which the CAB is to follow. The provisions in effect require "compulsory insurance." Indirectly, it would establish absolute liability in practice, even though it is not spelled out in so many words. The NASAO has been cognizant of the need for greater coverage of civilian flying with some form of protection to third persons and property on the ground as an adjunct of the enforce-

ment problem for several years. As has been reported, this past year, attention has been given to the various state laws of liability of aircraft owners and operators, resulting in the appointment of a Special Committee of the NASAO for Revision of state laws. That Committee has under very active study the matter of a financial responsibility model law under the general subject of liability. Its efforts thus far, still in the working study stage, reflect the industry's leaning toward financial responsibility laws at the state level rather than compulsory insurance law at the federal level. Experience had in the one state, Massachusetts, in the motor vehicle field, indicates that the majority of claims lead to awarding damages irrespective of the normal defenses which the insured could invoke. That is the indirect manner of effecting absolute liability.

The Bill attempts to place at the federal level a responsibility which should be administered at the local level, both from the standpoint of legal precedence and efficiency in administration. Unless greatly increased appropriations are made available to the CAB for the additional personnel and equipment to keep records of the financial responsibility coverage on each of the owners of the 90,000 aircraft presently registered with the CAA, not mentioning keeping such records in current condition on various changes in ownerships, cancellations or renewals of policies, accidents requiring recording against individual registration, it would appear that the intent of the Bill would not be fulfilled. Cases in courts would be delayed to such an extent that recoveries would defeat the distress needs of the injured and damaged persons.

The State of Illinois enacted in 1949 two new aviation laws on this subject. Section 83 of the Illinois Aeronautics Act is known as the Guest Act, and Section 42 of the Illinois Aeronautics Act is known as the Aircraft Financial Responsibility Law. In the latter section, the owner of every aircraft which is involved in an accident within the State of Illinois, in which any person is killed or injured, or in which damage to property is sustained in the excess of $50.00, must report such accident in writing to the Department of Aeronautics within ten days after such accident. The Department then determines whether the accident is such as to require deposit of security for satisfaction of any judgment for damages resulting from such accident. Evidence of coverage may be in the form of aircraft liability policy of insurance, bond, or evidence of ability to act as self-insurer. Registration of ownership and operation of aircraft at the state agency, is a fundamental requisite for insurance coverage.

Since compulsory insurance has not fulfilled its purpose in cutting down reckless operation of motor vehicles, but on the contrary has increased violations of safe operating standards as experienced in Massachusetts, the NASAO Committee is giving full consideration to that aspect of any proposed coverage for aircraft owners and operators. The results of the studies of the NASAO Special Committee will be presented to the NASAO annual meeting at Minneapolis, Minnesota, on October 2-4, 1950. It is hoped that no legislation at the federal level will be enacted in this subject until the NASAO views are available.

States Modify Absolute Liability Rule

Indication of the efforts of state aviation directors to achieve elimination or some modification of the "absolute liability" provision of the early model Aeronautics Act Section 5, is found in 1949 amendments to the aviation laws of South Dakota, Maryland, and Wisconsin. They are quoted in part as follows:

SOUTH DAKOTA—Amending Section 2.0305 of the South Dakota Code of 1949, relating to Aeronautics.

"2.0305 *Damage on Land.* The owner and the pilot, or either of them, of every aircraft which is operated over lands or waters of this state shall be liable for injuries or damage to persons or property on the land or water beneath, caused by the ascent, descent, or flight of the aircraft, or the dropping or falling of any object therefrom in accordancce with the rules of law applicable to torts in this state.

"As used in this section, 'owner' shall include a person having full title to aircraft and operating it through servants, and shall also include a bona fide lessee or bailee of such aircraft, whether gratuitously or for hire; but 'owner' as used in this section, shall not include a bona fide bailor or lessor of such aircraft, whether gratuitously or for hire, or a mortgagee, conditional seller, trustee for creditors of such aircraft or other person having a security title only, nor shall the owner of such aircraft be liable when the pilot thereof is in possession thereof as a result of theft or felonious conversion."

MARYLAND—Chapter 422, paragraph 9, Laws of 1949:

"*Damages on Land.* The owner of every aircraft which is operated over the lands or waters of this State is prima facie liable for injuries to persons or property on the land or water beneath, caused by the ascent, descent or flight of aircraft, or the dropping or falling of any object therefrom, unless the injury is caused in whole or in part by the negligence of the person injured, or of the owner or bailee of the property injured, or unless at the time of such injury the said aircraft is being used without the consent, express or implied, of the owner. . . .

The presumption of liability on the part of the owner, or of the owner and lessee, as the case may be, may be rebutted by proof that the injury was not caused by negligence on the part of such owner or lessee, or of any person operating such aircraft with the permission of the owner of lessee, or of any person maintaining or repairing such aircraft with the permission of the owner or lessee. An airman who is not the owner or lessee shall be liable only for the consequences of his own negligence. . . ."

WISCONSIN—Chapter 539 of 1949 Wisconsin Laws, repealing and recreating 114.05 of the statutes, relating to liability for damage caused by operation of aircraft:

"114.05 *Damages by Aircraft.* The liability of the owner, lessee and pilot of every aircraft operating over the lands and waters of this state for injuries or damage to persons or property on the land or water beneath, caused by the ascent, descent or flight of such aircraft, or the dropping or falling of the aircraft or of any object or material therefrom, shall be determined by the law applicable to torts on land, except that there shall be a presumption of liability on the part of the owner, lessee or pilot, as the case may be, where injury or damage is caused by the dropping or falling of the aircraft or of any object or material therefrom, which presumption may be rebutted by proof that the injury or damage was not caused by negligence on the part of the owner, lessee or pilot and the burden of proof in such case shall be upon such owner, lessee or pilot to show absence of negligence on his part."

It would appear that in view of local conditions in some states the intermediate steps of "presumptive liability" has had to be taken in revision of laws for aircraft, but continuing efforts will be made at the state level to achieve acceptance of the general principles of liability based on negligence in general tort law, for aircraft, similar to other chattels, rather than singling aviation for special rules of liability.

M. C. D.

JUDICIAL AND REGULATORY DECISIONS

Department Editor: Bernard R. Balch*

LIABILITY FOR CROP-DUSTING

SINCE the advent of modern pest-control methods there have been only nine reported decisions dealing with the question of liability for damages resulting from serial crop-dusting, yet significantly, six of this number have been decided within the last two years, displaying the growing importance of airborne pest-control operations.[1] All of the earlier decisions held the "flying farmer" liable for damages, yet half of the recent cases have absolved him of all liability. This development may be attributed either to the specific facts of each case, or may be a part of the general trend of the courts to lessen the degree of care required of owners and operators of airplanes with regard to injury to persons or property on the ground.

The typical case[2] envisages the farmer employing an aviator experienced in "dusting" crops by air, to spray his fields with a poisonous substance designed to obviate the pending destruction of his crops from harmful pests. In this operation damage occurs to crops,[3] or animals,[4] on adjacent property. The injured party then seeks judicial aid in gaining reparations for the resulting damage. The basis of recovery is invariably negligence on the part of either the operator of the aircraft of the farmer who promoted the dusting.[5] The types of negligence generally alleged are: failure to cut-off the dusting equipment when passing over adjacent property,[6] operating

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[1] Agricultural flying, including crop-dusting, was a major topic of discussion at the recent Second Annual National Agricultural Aviation Conference at Fort Worth, Texas. Civil Aeronautics Administrator D. W. Rentzel in his address to the conference said agricultural flying is a most promising field, and that he believed it is "just getting started." Rentzel cited CAA figures showing that 1,724 operators are using 4,906 planes in crop-dusting, spraying, seeding, fertilizing, and defoliating, 227 companies are making equipment used in such operations and 19 schools are giving courses in agricultural flying. American Aviation Daily, March 10, 1950, p. 59. The CAA also reported in June 1950 that there had already been 1200 applications for waivers necessary for low-flying spraying operations. In 1949 the total number of applications for the year was 265.

[2] The facts of the simple case exemplified here, are almost universally common wherever crop-dusting damage occurs. In all of the reported decisions discussed in this note, the typical facts are present. If other facts altering the situation have occurred, they will be indicated.

[3] Damage to Crops: Chapman Chemical Co. v. Taylor,... Ark...., 222 S.W. (2d) 820 (1949); Burns v. Vaughan,... Ark...., 224 S.W. (2d) 365 (1949); Kennedy v. Clayton,... Ark...., 227 S.W. (2d) 934 (1950).

[4] Damage to Bees: Gerard v. Fricker, 42 Ariz. 503, 27 P. (2d) 678 (1933); Miles v. Arena Co. et al, 23 Cal. App. (2d) 680, 73 P. (2d) 1260 (1937); Lundberg et al v. Bolon, 67 Ariz. 259, 194 P. (2d) 454 (1948); Jeanes v. Holtz et al,... Cal. App...., 211 P. (2d) 925, (1949); Lenk v. Spezia et al,... Cal. App...., 213 P. (2d) 47 (1949); Damage to Livestock: Hammond Ranch Corp. and Homer Ricks v. Dodson and Williams, 199 Ark. 846, 136 P. (2d) 484 (1940).

[5] The exception to this statement occurred in Chapman Chemical Co. v. Taylor,... Ark...., 222 S.W. (2d) 820 (1949) (the manufacturer of the chemical dust was held liable for negligence in not running tests with reference to the volatility of the dust).

[6] Hammond Ranch Corp. v. Dodson and Williams, 199 Ark. 846, 136 S.W. (2d) 484 (1940).

the dusting equipment during high winds,[7] failure to give notice of the dusting operation to adjoining landowners,[8] and finally, a lack of care in not investigating the highly volatile nature of the poison used in the "dusting" operation.[9]

Gerard v. Fricker,[10] the first decision posing the question of crop-dusting liability, involved the typical fact situation previously set forth. Both the airplane owner and the farmer employing the pilot were held liable for damages to the adjoining landowner caused by the drifting of the poisonous dust. The major issue on appeal was the defendant's assertion that the dusting company employed was an independent contractor, and that therefore the defendants farmer was not liable for any damages suffered by the plaintiff. This assignment of error was denied with the court announcing that crop-dusting by aircraft was *per se* "inherently dangerous," and therefore the defendant could not delegate the work to an independent contractor and thus avoid liability.[11] The language of the court in speaking of the "inherently dangerous" nature of the work, said, "This is especially true where the agency or means employed to do the work, if not confined and carefully guarded, is liable to invade adjacent property, or the property of others, and destroy or damage it."[12] This language is slightly ambiguous for the "agency or means employed to do the work" may mean either the mode of transportation utilized, or the poison dropped from the airplane.[13] The court probably meant the latter for the cases cited by the court as authority for this proposition deal with the use of poisons for fumigation and pest-control purposes, administered on the ground.[14] If the court was referring to the aircraft itself as "inherently dangerous," the proposition is wholly unsupported.

Miles v. Arena Co.,[15] the next decision, and the first of a series of California decisions, held the promoter-farmer of the dusting operation liable

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[7] Miles v. Arena Co., 23 Cal. App. (2d) 680, 73 P. (2d) 1260, (1937).

[8] Lundberg v. Bolon, 67 Ariz. 259, 194 P. (2d) 454 (1948); Jeanes v. Holtz, ... Cal. App...., 211 P. (2d) 925 (1949).

[9] Chapman Chemical Co. v. Taylor,... Ark...., 222 S.W. (2d) 820 (1949); Burns v. Vaughan,... Ark...., 224 S.W. (2d) 365 (1949); Kennedy v. Clayton, ... Ark...., 227 S.W. (2d) 934 (1950).

[10] 42 Ariz. 503, 27 P. (2d) 678 (1933).

[11] The general rule is that an employer of an independent contractor is not liable for the torts of the contractor or the contractor's servants. Restatement, Torts §409 (1934); 57 C.J.S. §584 and cases there cited. Where though, the work is inherently or intrinsically dangerous, liability for harm caused cannot be evaded by employing an independent contractor, for in such cases the employer is responsible for the contractor's failure to exercise reasonable care to prevent harm resulting from the dangerous nature of the work. Restatement, Torts §427 (1934); 57 C.J.S. §590. "Inherently dangerous" means not only that the work itself or the instrumentalities used are such as can be safely performed only by the exercise of special skill and care, but also that the work, if unskillfully and carelessly done, involves a grave risk of serious property damage, bodily harm or even death. Comment, RESTATEMENT, TORTS §427 (1934)). See further 23 A.L.R. 1084.

[12] 42 Ariz. 503, 507 (1933).

[13] Many states had early considered the airplane to be a modern novelty of transportation, dangerous in operation. Section 5 of the UNIFORM STATE LAW FOR AERONAUTICS imposed absolute liability for damages by aircraft to persons or property on land or water, unless the injured party was at fault. See, RHYNE, AVIATION ACCIDENT LAW 65 *et seq.* (1947). Fourteen of the twenty-three states which have adopted this section on surface injuries have retained the feature of absolute liability. These states are listed at 235 CCH AVIATION LAW SERVICE p. 11002, §11000 *et seq.* (1943).

[14] Medley v. Trenton Investment Co., 205 Wis. 30, 236 N.W. 713 (1931); St. Louis & S.F.R. Co. v. Madden, 77 Kan. 80, 93 Pac. 586 (1908).

[15] 23 Cal. App. (2d) 680, 73 P. (2d) 1260 (1937).

for damages caused the plaintiff's nearby apiary, due to the drifting of poisonous dust on a windy day. Although the case was decided four years after the *Fricker* Case, *supra*, neither counsel cited it in the briefs, and the court thought that this was a case of first impression in this country. They reasoned that the fact situation presented, drifting of poisonous dust to adjacent property, was similar to drifting smoke, dust, noxious gases or similar substances originating on the defendant's property, and that the defendant should be responsible in damages for the resulting nuisance. The court did not speak of crop-dusting as "inherently dangerous," nor did the issue of shifting the liability to the independent contractor arise. In fact, the court said, "It must be conceded that, in itself, dusting vegetables to kill pests that prey upon them is a necessary and lawful operation which the owner of the vegetables may perform, either himself or through his servants, or may have performed by an independent contractor. However, he should not do the dusting, or have it done, under conditions which would indicate to a reasonably prudent person that damage to his neighbor would result.[16] From these words, it may be deduced that the California court was not holding the farmer or the "duster" to the high degree of care that the Arizona court felt necessary in the *Fricker* Case, *supra*, and that in the future the courts should allow the common law defenses to be raised.

The third of the three early decisions, *Hammond Ranch Corp. and Homer Ricks v. Dodson and Williams*,[17] presented facts very similar to those of the *Fricker* Case, *supra*, with the court here ruling that crop-dusting was "inherently dangerous" and thereby denying the defendant's attempt to shift the liability to the "independent contractor-duster."[18] No cognizance was taken of the nuisance theory of the *Arena* Case, *supra*. Thus, prior to 1948 both the Arizona and the Arkansas courts held crop-dusting to be "inherently dangerous," resulting in absolute liability, whereas the California court in the *Arena* Case, *supra*, held the defendant to a degree of care no higher than that of a reasonably prudent man.

In three of the next six cases, decided within the last two years, the defendant has avoided liability. In *Lenk v. Spezia et al*,[19] notice of the dusting operation had been given to the plaintiff, but he failed to take

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[16] 23 Cal. App. (2d) 680, 683, 73 P. (2d) 1260, 1262 (1937).

[17] 199 Ark. 846, 136 S.W. (2d) 484 (1940).

[18] Shifting of liability to the independent contractor-duster was again attempted in the most recent of these decisions, Kennedy v. Clayton,... Ark...., 227 S.W. (2d) 934 (1950), but the Arkansas court adhered to the rule of *Gerard v. Fricker*, the landmark case, in holding that the promoter's responsibility may not be delegated to an independent contractor thereby evading liability, as the task undertaken was of an "inherently dangerous" nature.

In Britton v. Industrial Commission of Wisconsin, 248 Wis. 549, 22 N.W. (2d) 525 (1946), the employer of the aviator was held liable for compensation in the death of the employee during a crop-dusting operation. On appeal, it was contended that the canning company which had engaged the crop-duster for the farmer-employer was liable for such compensation. Held, the decedent had not performed services directly for the canning company as the farmers owning the fields had the final determination as to whether the land would be "dusted" or not. The test adopted by the court was that if the canning company had been bound under contract with the farmers to dust the peas at its own expense and had equipment which it operated for that purpose, they, the canning company, would have been liable for the compensation.

[19] ... Cal. App...., 213 P. (2d) 47 (1949). This court lingered at great length over the problems relating to the duty owed trespassing honeybees. The court proceeded on the assumption that bees are domestic animals and resolved that wanton and malicious conduct and intent to injure and destroy was needed for recovery when trespassing bees are injured. But see, 2 Bl. Comm. 391 (Gavit Ed.) (1941), where bees are considered *ferae naturae* capable of only qualified property ownership.

precautions to protect his apiaries, whereas on previous occasions he had screened the beehives, thereby protecting his honeybees. The burden of proof on the plaintiff was very difficult as others in the area had also sprayed their fields about this time, and the understandable difficulty of proving which poisonous dust had caused the death of the hives was insurmountable. The defense of contributory negligence was allowed by the California court, and the defendant prevailed.

In *Jeanes v. Holtz et al*,[20] another California decision, the plaintiff alleged that no forewarning notice had been given of the dusting operation as required by statute,[21] and that his bees had been damaged thereby. The court answered this contention by stating baldly that notice would not have stopped the bees from wandering, and their resultant contact with the poison. This district of the California Court of Appeals it seems, did not have the advantage in point of time, of the *Spezia* decision, *supra*, decided the next month by another appellate district, where the notified farmer's failure to screen his beehives resulted in denial of recovery.[22] Here the plaintiff did not have that precautionary warning, and yet was denied recovery, for he had failed to assert that the resulting damage was occasioned by the bees contacting the poison on his own property. The court adopted some dictum of an Arizona decision, *Lundberg et al v. Bolon*,[23] which indicated that where the bees come in contact with the dust as trespassers, recovery must be denied. A question might be raised as to a bee's capacity to be considered a trespasser. The defense of trespassing of bees might be countered by a theory of license, for the plaintiff should not be heard to call them trespassers, after he has previously accepted the benefits of their cross-pollination. This question may soon have to be answered by the courts, for damage to apiaries seems to be the most prevalent harm occasioned by dusting operations in the majority of the reported decisions.[24]

In the third case in which the farmer escaped liability, *Chapman Chemi-Cal Co. v. Taylor*,[25] the action was originally brought against a rice growing company for damages caused plaintiff's cotton crop. The defendant rice company filed a cross-complaint, in the nature of an interpleader, against the manufacturer of the chemical dust, 2,4-D,[26] alleging either joint liability, or complete liability on the part of the manufacturer. The basis of the cross-complaint was similar to Cardozo's reasoning in the case of *MacPherson v. Buick Motor Car Co.*,[27] in that the chemical company failed to perform tests on the floating power of the dust prior to its being offered for sale. The defendant rice company was absolved of all liability, but the chemical company was held accountable for the damage done by the use of such an "inherently dangerous" article on the principle that "where the thing, when put to the use for which it was intended, by reason of defects which were known, or by the exercise of reasonable care could have been known by the manufacturer, and the injury results from such use, the manufacturer is

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[20] ... Cal. App...., 211 P. (2d) 925 (1949).

[21] Rules and Regulations of the Director of Agriculture, §1(c), issued pursuant to CALIFORNIA AGRICULTURAL CODE §150 (Deerings, 1944); repealed by CALIF. STAT. 1949, c. 1043, §1. For present pest-control regulations in California, see the CALIFORNIA AGRICULTURAL CODE §§160.1-160.9 (Deerings, 1949).

[22] See further Lundberg v. Bolon, 67 Ariz. 259, 194 P. (2d) 454 (1948) (question of liability turned exclusively on the issue of notice).

[23] *Ibid.*

[24] See note 4, *supra*.

[25] ... Ark...., 222 S.W. (2d) 820 (1949).

[26] The chemical name of 2,4-D is dichlorophenoxyacetic acid.

[27] 217 N.Y. 382, 111 N.E. 1050 (1916).

liable."[28] A showing was made by the rice company that it had sought counsel as to the intended use of the dust prior to purchase, and that a high degree of care in applying the dust had been exercised by their pilot. This decision seems to fall within the scope of the "inherently dangerous" rule adopted by this same Arkansas Court in the *Hammond Ranch* Case, *supra*, thereby obviating the necessity of proving a defect in the dust other than its highly poisonous nature. Quite possibly this same result would have been reached under the California "reasonably prudent man" test, for the damage incurred here would have been forseeable if the highly volatile nature of the dust had been discovered in pre-marketing tests. Five months after the *Chapman Chemical* Case, *Burns v. Vaughan*[29] was decided by the same court. The identical issues were raised with regard to the extreme volatility of the 2,4-D dust, and both the farmer and the chemical manufacturer were held liable for the resulting damage. The manufacturer did not appeal the adverse judgment, and on appeal by the farmer the Arkansas court affirmed for the plaintiff. The court placed the onus upon the defendant-farmer, for he had constructive notice of the possible harm as previous dusting damage had recently occurred in the locality. Besides this failure to act upon such notice, the pilot of the aircraft continued to spray the defendant's fields during a high wind, although his instructions were not to do so. The court advanced the proposition that the defendant farmer could have avoided the damage by seeking advice with regard to proper application of the spray from the federal agricultural agent in his county, appointed specifically for that purpose.[30] It was this type of information that was not available to the farmer in the *Chapman Chemical* Case, thereby allowing him to shift the liability to the manufacturer of the chemical dust.

In the *Chapman Chemical* Case, and *Burns v. Vaughan*, the Arkansas Supreme Court warned that the promoter of a "dusting" operation should gain adequate knowledge of the methods of "dusting" to be employed, commensurate with the destructive propensities of the 2,4-D spray utilized. In spite of this warning, the most recent crop-dusting case, *Kennedy v. Clayton*,[31] found the defendant again lacking this vital information, to his detriment. Even though safety precautions were employed by the defendant, the court felt that ordinary care was insufficient, and that the defendant should have exercised a degree of care commensurate with "known" danger. Although the defendant-farmer was held liable in this case, the last-mentioned test of liability by the Arkansas court seems to be a far-cry from the absolute liability normally rendered under the "inherently dangerous" test, and seems to be a more lenient stand approaching the "rea-

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[28] *Ibid.*
Evidence presented in the *Chapman* Case, displayed to the amazement of the manufacturer of 2,4-D, that the spray vaporized in the air, and spread for miles. This showing certainly substantiated the court's warning of great danger that might occur if tests are not made when the sprays are placed on the market.

[29] ... Ark...., 224 S.W. (2d) 365 (1949).

[30] 38 Stat. 373 (1914), 7 U.S.C. §342 (1939). "Cooperative agricultural work shall consist of the giving of instruction and practical demonstrations in agriculture . . . to persons . . . in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise . . ." Section 341 of the same title, provides for agricultural aid and instruction at any federally endowed agricultural college cooperating with the agricultural extension program.

[31] ... Ark...., 227 S.W. (2d) 934 (1950). All three crop-dusting cases involving 2,4-D, the volatile "dust," have been decided by the Arkansas Supreme Court. It seems to be the most satisfactory chemical available for spraying rice fields, but is certain death for broad-leaved plants, thereby requiring great care in its usage.

sonably prudent man" test first adopted by the California courts. Such a test allows flexibility in determining what damage is foreseeable by the reasonable man under the peculiar circumstances of the activity, and alleviates the harsh penalty experienced by defendants where the "inherently dangerous" test is applied with almost certain liability.

It is hoped that from these relatively few cases some semblance of workable solutions may be found. It is relatively difficult to prescribe definite requirements, but the following are suggested to the promoter of crop-dusting ventures as guides in avoiding damage to adjacent property and resulting liability.

(1) Obtain complete information concerning the poisonous nature of the dust, its volatile propensities, and the proper methods of spreading by aircraft. Such information should be readily available from either the manufacturer of the chemical, his local representative, or from the local county agricultural agent.[32] If the dust does not seem suitable for the airborne operation, substitute a more easily controlled chemical.

(2) Hire only experienced, capable and reliable pilots, for the stigma of the "inherently dangerous" rule does not allow the shifting of liability to the pilot under the independent contractor rule.[33]

(3) Publish notice of the intended "dusting" in the local newspaper, and wherever possible, contact adjacent landowners personally, informing them of times, dates, and suggested precautions they may take.[34] The cases indicate that notice, if given, may shift the burden of loss for the resulting damage to the adjacent landowner, if he failed to observe precautionary measures.[35]

(4) Be explicit in the instructions given the pilot. Inform him that care must be taken in cutting-off the spray a safe distance before adjacent property is crossed in making turns for the return run.[36] The time of the cut-off should vary with the volatility of the dust, otherwise even slight wind will carry the poison for hundreds of yards resulting possibly in damage and liability. This last factor should be one of those discussed with the manufacturer of the dust, and the county agricultural agent.

(5) In conjunction with the pilot, and the United States Weather Service, obtain sufficient weather data, wind velocity and direction in particular, to enable pilot to choose the proper weather in which to operate. The pilot must be informed that all "dusting" is to cease when the wind reaches

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[32] See note 30, *supra*.

[33] CALIFORNIA AGRICULTURAL CODE §§160.2, 160.6 (Deerings, 1949) provide for the registration, licensing, and examination of all pest-control operators using aircraft. Such control, if properly enforced would aid immeasurably in cutting down damage resulting from negligence of the operator.

[34] Lundberg v. Bolon, 67 Ariz. 259, 194 P. (2d) 454 (1948) (liability turned specifically on question of notice); Burns v. Vaughan,... Ark...., 224 S.W. (2d) 365 (1949) (recent dusting operations by others considered constructive notice to defendant); *Contra*: Jeanes v. Holtz,... Cal. App...., 211 P. (2d) 925 (1949) (failure of statutory notice held not proximate cause of damage, but see note 35, *infra*.).

[35] Lenk v. Spezia,... Cal. App...., 213 P. (2d) 47 (1949) (failure to take precautionary measures after notice was given, held, contributory negligence, resulting in denial of liability).

[36] Hammond Ranch Corp. v. Dodson and Williams, 199 Ark. 846, 136 S.W. (2d) 484 (1940) (employer held liable when pilot did not cut off poison when circling over plaintiff's pastures, causing injury to livestock).

a velocity making any operations precarious.[37] Test runs should be made with an observer on the ground viewing the possibilities of danger. Flag signals might possibly be employed to inform the pilot of the success or imminent failure of the spreading operation.

Although many of these suggestions seem elementary, a recurrence of these factors has appeared in the reported decisions as forerunners of liability, thereby necessitating notice of them in all "dusting" operations in order to satisfy the courts' standard of a high degree of care. The position first assumed by the California court, and the present implication of a similar tendency on the part of the Arkansas court not to apply the "inherently dangerous" rule to all crop-dusting operations is an encouraging sign. It indicates that aerial crop-dusting, along with other phases of aviation, has come of age, and no longer is a mode of transportation that is to be penalized for its swiftness and flexibility. Despite this enlightened view of the use of aircraft, the aforementioned precautions should be observed, for the courts still recognize dangers inherent in the poisons used in aerial crop-dusting.

JAY L. OLSCHANSKY*

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[37] Miles v. Arena Co., 23 Cal. App. (2d) 680, 73 P. (2d) 1260 (1938) (dusting operations took place on windy day resulting in damage to an apiary; held, the defendant should have exercised extreme care so as not to injure the property of others. Operating in strong winds resulted in harm foreseeable by the defendant).

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BOOK REVIEWS

FLIGHT INTO HISTORY: THE WRIGHT BROTHERS AND THE AIR AGE; by Elsbeth E. Freudenthal; University of Oklahoma Press, Norman, Oklahoma, 1949. 268 p., $3.75.

Appearing less than six months after the return of the Kitty Hawk plane to America, Elsbeth Freudenthal contributes to the current interest in the lives of the Wright brothers. She not only provides us with additional insight into their genius, but she also, through her scholarly and human treatment of the materials with which she worked, whets the appetite of the reader for more information on these brothers whose invention has revolutionized history.

Miss Freudenthal in her biography had access to the Chanute papers. Coupled with her already extensive background on the business, science, and industrial aspects of aviation,[1] Elsbeth Freudenthal gives us a picture of the Wright brothers between 1902 and 1911 that attempts to bring out their relationship with the men of science and others interested in the development of an airplane. She explains the Wright brothers' reticence, their attitudes toward their contemporaries, and their relationships with Chanute in terms of their trying to keep secret their invention in order to capitalize on it.

As the inventors of the first man-carrying, powered and controlled heavier-than-air craft and as aeronautical engineers and scientists, they had worked out the problems of aerodynamics that had baffled the world's greatest scientists; they felt that they had a right to the rewards that were theirs by the right of invention. They considered their potential customers to be the armed forces of the United States and the other countries of the world. They felt that their competitors both in the United States and abroad who were trying to master the problems of flight might, with the secrets that they had discovered, prevent them from reaping the awards that were theirs.

According to Freudenthal, the Wright brothers' ambition was not to gain great wealth. Rather it was to gain for themselves recognition as the pioneers of flight and financial independence sufficient to carry on their work of research and study in aeronautics.

This biography does not pretend to give us a complete picture of the Wright brothers. It attempts to explain their motivations and activities during the years of the first decade of the twentieth century. It concerns itself primarily with their efforts to establish aviation as a business, and to establish themselves in the aviation business.

Another recent biography which concerns itself with this period of their lives is that by Fred C. Kelly. In his *The Wright Brothers*[2] published in 1943, he as a newspaper man gives considerable thought to that fascinating public relations problem of how and why the world failed to grasp the significance of one of the greatest news stories of all times, the flight at Kitty Hawk.

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[1] *The Aviation Business, From Kitty Hawk to Wall Street.* New York, Vanguard Press, Inc., 1940. 342 p. $3.

[2] Kelly, F. C. *The Wright Brothers; a Biography Authorized by Orville Wright.* New York, Harcourt, Brace and Co., 1943. 340 p. $3.50.

Each of these biographies, however, clearly shows that the problem of determining the essence of the genius of these two inventors is not the simple one that Americans have been inclined to consider it. Perhaps, a definitive biography of the lives and times of the Wright brothers will appear in the next decade or two after scholars have had access to the Wright brothers' papers which have recently been given to the Library of Congress and will be freely available to scholars after 1960.

To stimulate the scholar and the biographer to come to serious grips with these native American inventors who revolutionized history are the unanswered but the very fundamental questions of biography: What was there in their family, their native town of Dayton, their boyhood, and their relationships with each other that produced this fruitful genius? What was there in the American scene of 1875 to 1910 that was conducive to the development of such abilities? One might even ask if the more highly specialized and the more highly regulated and controlled way of life today (yes, even the present status of aeronautical control and regulation) stifles men of the stuff of the Wright brothers. [At any rate a thorough-going appraisal of the lives and times of the Wright brothers might not only solve the biographical and literary questions the Wright brothers have created, but might also, by providing an insight into the recent past, make our understanding of the present clearer.]

FREDERICK B. TUTTLE*

AIR TRANSPORTATION, by G. Lloyd Wilson, and Leslie A. Bryan, Prentice-Hall, 1949. 665 p. $7.65.

A new book in the dynamic field of air transportation is bound to be news, especially since textbooks are not published in a loose-leaf form which permits of constant revision. AIR TRANSPORTATION, by G. Lloyd Wilson and Leslie A. Bryan is bound to have been examined extensively by this time by those interested in this subject.

The book includes chapters on those areas which might be called "standard" such as history of air transportation, air traffic control, the domestic airline system, and so on, but it also covers either for the first time, or in more extensive fashion than has been done previously, many new subjects which have become more and more prominent as air transport has developed. Nonscheduled services, airline tariff publication, coordination with ground transport, air carrier liability, aviation insurance, and foreign carriers are chapter titles or partial titles which draw interest.

The historical chapters are very complete presenting a detailed account of the beginnings of aviation, the development of different types of aircraft, and the personalities involved. The material on airport traffic control, the civil airways system, and airway traffic regulation are clearly presented and the diagrams which are included are well-chosen. A greater use of diagrams might have been in order in a segment which lends itself to this sort of presentation.

Three chapters are given over to a discussion of the routes and characteristics of the certificated trunk and feeder lines and the nonscheduled

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services as well as the foreign and territorial services of carriers domiciled in the United States. From time to time the authors make recommendations as to changes in the laws governing the carriers or in the policy of the Civil Aeronautics Board in administering the laws.

The domestic and international airmail system is discussed and the presently-important problem of subsidization is touched on. The transport of passengers, cargo and express, both foreign and domestic, the construction of fares and rates, state, federal and international regulation, and federal aid are among the subjects treated.

One of the main points of strength of the book is the conciseness of its presentation. The authors do not labor their points in tiresome fashion, nor do they beat the last bit of substance out of every subject. In some cases the discussion might have been lengthened: for example in the chapter on insurance, the question of the dollar cost to an airline for insurance on its passengers and on its aircraft would be of much interest to students. However, the brevity of the presentation is to be commended.

The main point of weakness of the book is one shared by all books and is not unique with this one: it is out-of-date on publication. Air coach transport has come forward so recently that it is barely mentioned in AIR TRANSPORTATION. The subsidy problem, while dealt with, might have been given fuller treatment had the authors had the benefit of recent books and reports dealing with that problem. The route pattern and the manner in which the Civil Aeronautics Board has handled it might also have been considered to a greater extent. The most commonly heard criticism of the book is one which can easily be remedied; it involves the 1947 and 1948 dates on the maps found in the pocket inside the cover. Since the Board issues these maps periodically it should not be difficult to replace them with later issues.

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